



**NAVAL
POSTGRADUATE
SCHOOL**

MONTEREY, CALIFORNIA

THESIS

**FRENCH NUCLEAR STRATEGY IN AN AGE OF
TERRORISM**

by

Braxton D. Rehm

December 2006

Thesis Advisor:
Second Reader:

Donald Abenheim
Rafael Biermann

Approved for public release; distribution is unlimited

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE*Form Approved OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE December 2006	3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE French Nuclear Strategy in an Age of Terrorism		5. FUNDING NUMBERS
6. AUTHOR(S)		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.		
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited	12b. DISTRIBUTION CODE A	

13. ABSTRACT (maximum 200 words)

This study treats the character of French nuclear policy since September 11, 2001; as such this work adds the most recent episode to a theme that, since the late-1950s, has concerned alliance statecraft faced with French "exceptionalism" in trans-Atlantic relations. In the post-Cold War era, the changes in the strategic environment have led to a further evolution in French nuclear deterrent policy which forms the heart of this study.

In 2001 and 2006, French President Chirac made policy speeches which specifically discussed nuclear strategy and clarified the shift in French thought and the justification for deterrence. In 2001, the most important element addressed *dissuasion* of regional powers and "rogue" states with WMD that may attack France. The 2006 speech incorporated the threat of state-sponsored terrorism into the nuclear *dissuasion* strategy.

The thesis investigates past and present developments in French nuclear strategy, with chief emphasis on the period from the end of the Cold War to the beginning of the twenty-first century; it highlights the forces that have shaped French doctrine and analyzes the viability of the nuclear strategy as seen by a U.S. observer. A review of French Cold War doctrine provides the necessary backdrop for an evaluation of new elements in French nuclear strategy and should act as a guide to students of same in U.S. and NATO policy circles.

14. SUBJECT TERMS French Nuclear Strategy, Deterrence, Nuclear Doctrine, France, European Nuclear Deterrence, Franco-American Relations, Regional Security		15. NUMBER OF PAGES 115	
16. PRICE CODE			
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release; distribution is unlimited

FRENCH NUCLEAR STRATEGY IN AN AGE OF TERRORISM

Braxton D. Rehm
Major, United States Air Force
B.A., Angelo State University, 1991

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

from the

NAVAL POSTGRADUATE SCHOOL
December 2006

Author: Braxton D. Rehm

Approved by: Donald Abenheim
Thesis Advisor

Rafael Biermann
Second Reader

Douglas Porch
Chairman, Department of National Security Affairs

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

This study treats the character of French nuclear policy since September 11, 2001; as such this work adds the most recent episode to a theme that, since the late-1950s, has concerned alliance statecraft faced with French “exceptionalism” in trans-Atlantic relations. In the post-Cold War era, the changes in the strategic environment have led to a further evolution in French nuclear deterrent policy which forms the heart of this study.

In 2001 and 2006, French President Chirac made policy speeches which specifically discussed nuclear strategy and clarified the shift in French thought and the justification for deterrence. In 2001, the most important element addressed *dissuasion* of regional powers and “rogue” states with WMD that may attack France. The 2006 speech incorporated the threat of state-sponsored terrorism into the nuclear *dissuasion* strategy.

The thesis investigates past and present developments in French nuclear strategy, with chief emphasis on the period from the end of the Cold War to the beginning of the twenty-first century; it highlights the forces that have shaped French doctrine and analyzes the viability of the nuclear strategy as seen by a U.S. observer. A review of French Cold War doctrine provides the necessary backdrop for an evaluation of new elements in French nuclear strategy and should act as a guide to students of same in U.S. and NATO policy circles.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	NEW THREATS AND THE EVOLUTION OF CONTEMPORARY STRATEGIES POST SEPTEMBER 11, 2001.....	1
B.	PURPOSE.....	2
C.	IMPORTANCE.....	3
D.	LITERATURE REVIEW	4
1.	Survey of Prior Work	4
2.	Major Debates	7
E.	METHODOLOGY AND SOURCES	9
1.	Case Study	9
2.	Sources	9
F.	CHAPTER SUMMARY.....	11
1.	Chapter II: France's Cold War Nuclear Deterrent Strategy, A Historical Review	11
2.	Chapter III: Evolution of French Nuclear Strategy beyond the Cold War.....	11
3.	Chapter IV: Viability of the French Nuclear Strategy.....	11
4.	Chapter V: Conclusion	12
II.	FRANCE'S COLD WAR NUCLEAR DETERRENT STRATEGY, A HISTORICAL REVIEW	13
A.	INTRODUCTION.....	13
1.	A Nuclear France: Inception of the <i>force de frappe</i>	14
2.	“Grandeur” and Independence: Revival of French Power in Europe at the end of the 1950s.....	15
3.	Nationalism on a Nuclear Level.....	18
B.	FRENCH STRATEGIC THOUGHT AND NUCLEAR STRATEGY	23
1.	The Theories of General Gallois	24
a.	<i>Nuclearization: Fundamental Changes in the Nature of War</i>	25
b.	<i>The Nation-State and ‘Proportional Deterrence’</i>	27
2.	The Theories of General Beaufre	28
a.	<i>Independent Nuclear Powers and “Multilateral Deterrence”</i>	28
b.	<i>The French Nuclear “Trigger”</i>	30
3.	Gaullist Strategic Thought.....	32
a.	<i>Driven by Circumstances: The “Anti-Cities” Strategy</i>	32
b.	<i>The Gaullist “Initial Safeguard”</i>	34
c.	<i>Defense for Every Point of the Compass</i>	35
C.	THE LEGACY OF DE GAULLE: FRENCH STRATEGY THROUGHOUT THE COLD WAR	36
1.	Rapprochement with NATO: The Fourquet Doctrine	37
2.	Pompidou: Continuation of Gaullist Strategy.....	38

a.	<i>The 1972 White Paper on National Defense</i>	39
b.	<i>Increasing Flexibility: Tactical Nuclear Weapons</i>	40
3.	Continuities with Change: Giscard d'Estaing and Mitterrand.....	42
a.	<i>Giscard's Adaptation of Nuclear Strategy</i>	43
b.	<i>Enlarged "Anti-Cities" Strategy</i>	44
4.	Mitterrand's Nuclear Strategy	45
D.	CONCLUSION	47
III.	EVOLUTION OF FRENCH STRATEGY BEYOND THE COLD WAR.....	51
A.	INTRODUCTION: THE SECOND COMING OF THE NUCLEAR AGE.....	51
1.	A New "World Order": The Second Nuclear Age.....	51
2.	Economics and Security in the Second Act of the Nuclear Age.....	53
B.	THE PROCESS OF CHANGE IN FRENCH STRATEGY SINCE THE COLD WAR.....	54
1.	Elements of Change: Chirac's 2001 Speech on Nuclear Deterrence.....	54
a.	<i>Nuclear Deterrence: Reaffirmation of Independence</i>	54
b.	<i>Flexible Deterrence against "Rogue States"</i>	55
c.	<i>The European Element</i>	57
2.	Chirac's 2006 Speech on Nuclear Deterrence	58
a.	<i>Deterrence of State-Sponsored Terrorism</i>	58
b.	<i>Striking at the "Capacity to Act"</i>	59
c.	<i>The "Warning Shot" Revisited</i>	59
d.	<i>Broadening "Vital Interests"</i>	60
e.	<i>Strengthening Nuclear Capability</i>	61
f.	<i>European Nuclear Deterrence</i>	61
3.	Response and Concerns of New French Doctrine.....	63
a.	<i>Increasing Nuclear Importance</i>	63
b.	<i>Proliferation Concerns</i>	64
c.	<i>Deterrence Credibility</i>	64
C.	CONCLUSION	65
IV.	THE VIABILITY OF THE FRENCH NUCLEAR DETERRENT	67
A.	THE END OF NUCLEAR DETERRENCE?.....	67
B.	THEORETICAL VALIDITY OF FRANCE'S NUCLEAR DOCTRINE	69
1.	Deterrence against State and Non-State Actors.....	70
2.	Strengthening Nuclear Deterrence through "Tagging"	73
3.	Nuclear Deterrence, Preventive War, and "Regime Change": Conflicting Means to an End	75
C.	ASSESSING FRANCE'S NUCLEAR DETERRENT CREDIBILITY....	78
1.	Capability: France's Nuclear Consensus and Ability	79
2.	Indicators of Interests and Resolve	83
D.	CONCLUSION	85
V.	CONCLUSION	87

LIST OF REFERENCES.....	95
INITIAL DISTRIBUTION LIST	101

THIS PAGE INTENTIONALLY LEFT BLANK

ACKNOWLEDGMENTS

At the outset, I should express my gratitude to my advisors, Professor Donald Abenheim and Professor Rafael Biermann. Professor Abenheim's commitment, patience and motivation are infectious, and I value his keen perceptions on European history and foreign policies. He does not simply teach; rather, he inspires us truly to understand the impact of history on current events and in the process guides us to a better understanding of the relevant issues that face us today. I would also like to thank Professor Biermann for his support and detailed advice on the complexities of European policy and security institutions. Their interest and encouragement on this endeavor contributed enormously to my understanding of the regional dynamics of Europe as an area for professional study and research once this writer returns to operations in the ranks of the USAF.

Most of all, I would like to thank my wife Annie and sons Christopher and Thomas for their sacrifices, commitment, and undying support. Annie has continuously provided excellent editorial review and guidance on all of my research and writing and has tirelessly sought to engage me with critical analysis during this endeavor. This thesis and my educational experience at the Naval Postgraduate School would not have been possible without their support and encouragement. I am eternally thankful for their love and patience.

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

A. NEW THREATS AND THE EVOLUTION OF CONTEMPORARY STRATEGIES POST SEPTEMBER 11, 2001

On January 19, 2006, French President Jacques Chirac explained the early twenty-first century evolution in French nuclear deterrent strategy thus:

The leaders of states, who would use terrorist means against us, as well as those who would envision using...weapons of mass destruction, must understand that they would lay themselves open to a firm and fitting response on our part. This response could be a conventional one. It could also be of a different kind.¹

The statement implies that a nuclear strike is now an option of French strategy against state-sponsored terrorism. This revision in nuclear strategy can be seen as a result of the September 11, 2001, al Qaeda attacks on the United States and the ongoing diplomatic efforts to limit the Iranian nuclear program. President Chirac clarified several aspects of French doctrine which have been the cornerstones of French nuclear deterrent strategy since the end of the Cold War. Additionally, he elaborated on many new aspects of the strategy, thus providing justification and reasoning behind the principles of the new doctrine. The speech met with mixed response throughout the international community causing alarm, for instance, among the left in Germany, long suspicious of Gaullist nuclear ideas, and was scrutinized by some experts and praised by many makers of policy. These mixed responses brought to the forefront critical questions concerning nuclear deterrent policy and its usefulness in the post-Cold War era.

The proliferation of nuclear weapons has continued since the Cold War, creating the opportunity for regional powers, “rogue” states and terrorist organizations to attain nuclear capabilities. This proliferation is most evident in the recent attempts by Iran and North Korea to attain and/or test nuclear capabilities and accelerate their nuclear programs in light of opposition throughout the international community. Statesmen, policy-makers, academics and activists as well as military strategists have joined many

¹ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L'Ile Longue, France, January 19, 2006):
http://www.elysee.fr/elysee/anglais/speeches_and_documents/2006/speech_by_jacques_chirac_president_of_the_french_republic_during_his_visit_to_the_strategic_forces.38447.html (accessed May 23, 2006).

international organizations to address concerns over strategies regarding nuclear weapons and the potential fallout of particular strategies. Since the end of the Cold War and the stalemate between competing superpowers, the issue of nuclear strategy has once again become of utmost importance, not only for those that have nuclear weapons, but also for the “have-not’s” who aspire to attain them. Surely non-proliferation has become more important, but the nuclear strategies that might negatively impact efforts by the international community to curb the threat of nuclear attack by extremist groups or “rogue” states have attained a greater prominence in strategic thought and practice as well. The world of the early twenty-first century is no longer one in which the mid-twentieth century principle of mutually assured destruction maintains a balance of power. Quite the contrary, as the threat of terrorist attacks using weapons of mass destruction provided by “rogue” states or regional powers becomes more ominous, the issue of nuclear strategy has become increasingly important to world leaders. Many such institutions as the North Atlantic Treaty Organization (NATO), the United Nations (UN) and several Non-Governmental Organizations (NGO’s) have shown interest in evolving nuclear strategies and capabilities which may have a critical impact on world events. Not-withstanding, as globalization continues to advance and the proliferation of nuclear technology becomes more readily available, nuclear policy and strategy will be of critical concern for the multitude of individuals and organizations, states and nations which have a vested interest in understanding and designing current nuclear strategies and policy.

B. PURPOSE

The thesis will investigate the evolution of French nuclear strategy from the end of the Cold War to the beginning of the twenty-first century and assess the viability of this doctrine in relation to terrorist threats, such regional powers as Iran and the current international environment. French doctrine has shifted from the Cold War “anti-cities” strategy primarily aimed at deterring the more robust and advanced Soviet Union, to a strategy that incorporates potential responses to major power threats, regional actors, and “rogue” states that may sponsor terrorist organizations and their actions. Throughout this examination the focus will be on the historical changes in French doctrine, technology and nuclear strategy and those events and philosophies that helped shape French strategic thought. For the purpose of this thesis these events and philosophies

will be categorized as political, ideological, military, economic, and international, each of which play a significant role in shaping French doctrine. The political and ideological issues can be linked to France's post-1945 search for "grandeur" in the international system, while the military and economic issues can be seen as limiting forces on the shape of French doctrine. International events play a significant role in this subject due to the force of new threats and crises that have a pronounced effect on policy. More specifically, this thesis will address the issue of France as a regional nuclear power and speculate on the overall validity of nuclear deterrence against state and non-state sponsored terrorism. Furthermore, this study analyzes the impact that contemporary French nuclear strategy may have on world events, United States (U.S.) foreign policy, and overall non-proliferation goals. This shift in strategy may create potential problems, particularly for the U.S., in the areas of nuclear proliferation, alliance cohesion and nuclear strategy within the North Atlantic Treaty Organization (NATO), the foreign and security policy of the European Union (EU) and future transatlantic cooperation between France and the U.S.

C. IMPORTANCE

The issue of nuclear strategic doctrine and deterrence has re-energized a dilemma since the end of the Cold War. That dilemma can be summed up in the question: "What deterrent role and usefulness can nuclear weapons have against current and existing threats, and what are the most effective means to implement a nuclear deterrent strategy. Since 2001, the threat of nuclear terrorism has added a unique twist to the threat and capability for many nuclear countries. The importance of this thesis is to fill the gap in current writings and research concerning the viability of the French nuclear deterrent strategy against terrorism, whether state or non-state sponsored. Additionally, this work will provide policy makers, students and faculty with a more in-depth look at the past and present strategic thought and practice of French nuclear policy in order to provide theoretical guidance and potential strategies (based on the French model) which may be useful to the U.S. and its allies and could be considered for future nuclear doctrine. Moreover, due to the strategic friction between France and the United States since the inception of NATO in 1948, and more recently since the invasion of Iraq, further scholarly attention is a must to identify motives, sources, and policies that may help to

enlist France to aid the goals of U.S. policy generally, and, in the process, perhaps to avoid some of the worst pitfalls of misbegotten policy and strategy as have episodically beset Franco-American relations in the last half century and more.

D. LITERATURE REVIEW

1. Survey of Prior Work

When placing France at the forefront of this discussion, it is relevant to note that scholars have accorded French nuclear deterrence a secondary role in analyses compared to more prominent Cold War strategies such as mutually assured destruction (MAD) and flexible response, to say nothing of Soviet nuclear strategy. Additionally, historians, strategists, academics and policy-makers as well as political scientists classified France as a second-tier power which maintained a minimal deterrence against the Soviet Union within the Cold War context. This theme ranked as inferior in theoretical or policy relevance than that of, say, the nuclear concepts of the Soviet Union or Great Britain. Leading scholars have chosen to address the political and ideological issues surrounding France's desire for nuclear weapons and the "grandeur" associated with them, its desire for autonomy and independence based on Gaullist thinking, and the discord these issues have created within the transatlantic relationship, rather than the legitimacy and functionality of the French doctrine.² This is not to say that French doctrine has been totally ignored, but more accurately de-emphasized, due to the primacy of bipolarity during the Cold War. This same sentiment has also pervaded the post-Cold War era in which terrorism, non-proliferation and conventional regional conflict have overshadowed strategic nuclear thought, however, these same issues have now factored regional nuclear strategies into the analysis and several sources have contributed to an increasing body of literature concerning not only nuclear doctrine in general, but more specifically developments in French nuclear deterrence. This body of literature concentrates primarily on the political, ideological and historical settings that existed during the development and implementation of French strategy as well as the potential results of the

² For further references on France's Cold War nuclear strategy and capabilities see, Wilfrid L Kohl, *French Nuclear Diplomacy* (Princeton, NJ: Princeton University Press, 1971); Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: Palgrave Macmillan, 2003); Henry D. Sokolski, ed. *Getting Mad: Nuclear Mutual Assured Destruction, Its Origins And Practice* [book on-line] (The Strategic Studies Institute Publications Office, U.S. Army War College, 2004), <http://www.npec-web.org/Books/GettingMAD.pdf> (accessed June 16, 2006).

doctrine, rather than in-depth analysis of the usefulness and viability of the current strategy.³

The scholarly literature on this subject falls into three broad categories: the political and strategic history of the Cold War to include the basis and foundations for nuclear deterrent strategy; the challenges to French nuclear deterrence in the post-Cold War period; and finally, evolving nuclear strategic theory with regard to nuclear terrorism and conventional weapons of mass destruction. Thus, Wilfrid L. Kohl provides a comprehensive and detailed account of French nuclear diplomacy during the Cold War with emphasis on the political and ideological aspects of French policy, and Jonathan Mercer evaluates the role of reputation and prestige within international affairs, with obvious repercussions for the topic.⁴ Lawrence Freedman provides a thorough history of the evolution of nuclear strategy from its inception through the end of the Cold War.⁵ Philip Gordon and Anand Menon, moreover, ties nuclear strategic thought together with the history and politics which shaped French nuclear strategy and policy.⁶ The works of these prominent scholars provide the historical and strategic foundation for this thesis.

Three specialist have written, in particular, on the evolution of French doctrine since the end of the Cold War: David Yost, in 2006 a visiting professor at the NATO Defense College in Rome and a Professor at the Naval Postgraduate School, Monterey California; French political scientist Bruno Tertrais of the Strengthening the Global Partnership Project; and Pascal Boniface, Director of the Institute for International and Strategic Relations (IRIS). Literature on the history of French nuclear forces and doctrine provides valuable information on the processes, technology and concepts, as well as the international and domestic events which have contributed to the shaping of

³ A valid strategy in this case would be considered one that has a theoretical foundation based on realistic expectations supported by factual data, academic thought, and political and military capabilities.

⁴ Kohl, *French Nuclear Diplomacy*; Jonathon Mercer. *Reputation and International Politics* (Ithaca, NY: Cornell University Press, 1996).

⁵ Lawrence Freedman. *The Evolution of Nuclear Strategy* (New York: Palgrave Macmillan, 2003).

⁶ Philip H. Gordon. *A Certain Idea of France* (Princeton, NJ: Princeton University Press, 1993); Anand Menon. *France, NATO and the Limits of Independence 1981-97* (New York: St. Martin Press, Inc., 2000).

French doctrine since the end of the Cold War.⁷ These writings build a clear picture of previous French nuclear policy and what has prompted new and evolving strategies and doctrine. This literature provides commentary on the current strategy and highlights many of the elements of the doctrine which President Chirac has spoken about since the late 1990's. Furthermore, this literature brings out the continued elements of the doctrine which have been a continuing part of the overall strategy since the early 1990's. It also supplies significant data on public opinion, economics, political issues and world events that not only influence French policy-makers but have a decisive role in the development of strategy. Moreover, the literature on the subject provides several dissenting viewpoints and supporting arguments, providing a sounding board for concerns that have been voiced about the new doctrine. Additionally, the research highlights the shift toward a doctrine more similar to the United States strategy and brings out the congruence of both countries vision on the use and maintenance of nuclear power and forces.

Nuclear deterrence in general and its legitimacy against terrorism or “rogue” states, which may supply terrorist organizations, has received considerable attention recently. T. V. Paul, Richard J. Harknett, and James J. Wirtz have compiled considerable knowledge concerning the debate on the future of nuclear weapons in the post-Cold War era.⁸ This compilation of writings tends to focus on the international order after the Cold War, new and emerging nuclear states and a comprehensive discussion about the legitimacy of minimal deterrence. Research and theoretical arguments by Jasen J. Castillo, a political scientist with the RAND Corporation, and Michael A. Levi, a nuclear physicist with the Brookings Institution, postulate the continued value of nuclear deterrence in an age of terrorism and provide important insight into strategic and

⁷ For a comprehensive analysis on the evolution of the French nuclear deterrent strategy since the end of the cold war, cf. David S. Yost. "France's Nuclear Dilemmas." *Foreign Affairs* 75:1 (1996), 108–20; idem. "France's Evolving Nuclear Strategy." *Survival* 47:3 (2005), 117-146; idem. "France's New Nuclear Doctrine," *International Affairs* 82:4 (2006), 701-721; Bruno Tertrais. "Nuclear policy: France Stands Alone," *Bulletin of the Atomic Scientists* 60:04 (2004), 48-55, http://www.thebulletin.org/article.php?art_ofn=ja04tertrais (accessed June 3, 2006); idem. *Nuclear Policies in Europe* (Oxford, NY: Oxford University Press, 1999); Pascal Boniface. "The Future of the French Nuclear Posture." *Strategic Analysis* 23:8, (November 1999), http://www.ciaonet.org/olj/sa/sa_.html (accessed July 20, 2006).

⁸ T.V. Paul, Richard J. Harknett and James J. Wirtz, eds. *The Absolute Weapon Revisited; Nuclear Arms and the Emerging International Order* (University of Michigan, 1998).

technical thought which has considerable application to the topic of French nuclear deterrent strategy.⁹ Additionally, these works provide the necessary background and critical thinking to help guide technological and policy decision for the future.

Such works share one important feature: they all discuss the general evolution of nuclear deterrent strategy and can be applied directly into the discussion and evaluation of the French of strategic thought and the validity of nuclear deterrence continues to have value in the post-Cold War era, but not without implications that need to be addressed on different policy levels.

2. Major Debates

From these writings there are three main arguments which emerge. The first of the debates concerning the new French doctrine revolves around the concern of broadening strategic criteria and lowering the threshold for the combat use of nuclear weapons. President Chirac included in his address that one of France's vital interests now includes "strategic supplies" in addition to territories and surrounding areas vital to national integrity. These policy statements have effectively included a wide range of assets and energy sources that would require the President to make far reaching decisions on their value and the ultimate use of nuclear weapons. Contributing to this is new technology which will allow French nuclear forces the capability to employ a weapon with more control and a less-devastating effect. Critics of the new doctrine argue that the combined effect of broadening the criteria for the use of nuclear weapons and development of new technologies allowing more ease of use has lowered the threshold to which nuclear weapons may be used.¹⁰ Supporters of the new doctrine argue instead that by making nuclear capabilities more controllable and widening the assets to be protected, such a policy will deter aggressors even more. This sentiment was reinforced in a *Financial Times* article that stated, "the greater the prospect of France being able to limit

⁹ Jasen J. Castillo. "Nuclear Terrorism: Why Deterrence Still Matters," *Current History*, 659, (December 2003), http://www.currenthistory.com/org_pdf_files/102/668/102_668_426.pdf (accessed September 07, 2006); Michael A. Levi, "Deterring Nuclear Terrorism," *Issues in Science and Technology* 20:3 (Spring 2004), 70-74, <http://www.brookings.edu/views/articles/levi/20040401.htm> (accessed August 10, 2006).

¹⁰ Yost, "New Nuclear Doctrine," 701-721.

the scope of a nuclear strike, the greater the chance of a French president daring to order one, and therefore the greater the potential deterrent effect of the *force de frappe*.”¹¹

This debate fuels the second significant argument concerning the new French doctrine which centers on the importance of nuclear weapons as a key component of national security. In President Chirac’s speech, he clearly indicated France’s need for and continued support of a nuclear strategy and arsenal when he stated:

In the face of the crises that shake the world, in the face of new threats, France has always first chosen the road of prevention. It remains, in all its forms, the very basis of our defense policy. . . To be heard, one must also, when necessary, be able to use force. We must therefore have an important capacity to intervene beyond our frontiers with conventional means in order to uphold and complete this strategy. Such a defense policy relies on the certainty that, whatever happens, our vital interests will be protected. That is the role assigned to nuclear deterrence, which is directly in keeping with the continuity of our strategy of prevention. It constitutes its ultimate expression.¹²

With this statement many feel that the need for, and acquisition of a nuclear capability, has been accentuated. Critics argue that current non-proliferation goals have been diminished due to the stated importance of nuclear weapons by a regional power and this contradicts efforts to downgrade their importance and promote nuclear nonproliferation and disarmament. Supporters of the strategy say that highlighting the nuclear option will actually be helpful in negotiations with states trying to acquire nuclear assets, such as Iran. These same supporters claim that the strategy signifies the willingness of a European state to consider actions outside the purview of the United States’, which may ultimately influence potential nuclear-ambitious nations at the bargaining table.¹³

The third major debate concerning the new French strategy centers on the usefulness of nuclear deterrence against non-state and state-sponsored terrorism. One of

¹¹ John Thornhill and Peter Spiegel. “Relevance of ‘force de frappe’ to terrorist age,” *Financial Times*, (January 20, 2006).
<http://search.ft.com/searchArticle?page=2&queryText=nuclear+deterrence&y=0&javascriptEnabled=true&id=060120000865&x=0> (accessed May 30, 2006)

¹² Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L’Ile Longue, France, January 19, 2006)

¹³ Yost, “New Nuclear Doctrine,” 701-721.

the primary questions is: “is nuclear deterrence effective against non-state actors?” Virtually all the literary sources agree that nuclear deterrence is not useful against terrorist organizations. The larger question from this debate is that of state sponsorship. How can France guarantee significant proof, beyond a reasonable doubt, of ties between terrorist actions and state sponsorship? Granted the somewhat mixed record of such issues in the prelude to the 2003 campaign against Iraq, critics argue that faulty intelligence and/or manipulation may lead to a nuclear strike without solid justification. Such a strike would be devastating to international order and potentially spark a backlash resulting in a major theater war or even a “clash of civilizations.” Proponents of the strategy argue that intelligence sources are capable of discerning verifiable linkages between terrorist organizations and state sponsors. More importantly, they argue that the threat of nuclear retaliation is enough to dissuade would-be state sponsorship of terrorist actions. However, if those states have an established nuclear arsenal, a major dilemma could unfold that would severely challenge French leaders and the world community. These arguments will most certainly affect many of the political and strategic developments within Europe and in the international community.

E. METHODOLOGY AND SOURCES

1. Case Study

This is a single case study of French nuclear doctrine applying a longitudinal evolutionary analysis that ranges from the Cold War and its evolution throughout the 1990’s up to the present. A content analysis of public speeches by President Jacques Chirac will provide the foundation and will be used to highlight the philosophy and rationale, approaches and concerns of French strategic thinking. The analysis will focus primarily on French doctrine, but will include comparisons to other strategic nuclear doctrines to address specific issues related to nuclear deterrent strategy. Additionally, a thorough review of policy will provide unique and specific information that will further highlight the issues concerning the new French doctrine as well as reveal issues that may impact policy, public opinion and future strategic doctrine.

2. Sources

The historical case study of the evolution of French nuclear strategy will rest on a thorough evaluation of scholarly books and academic journal articles specifically

discussing the transformation of doctrines, but also the decisive influence on them. Additionally, a survey of newspapers will also be used to extract material from several different perspectives that will further highlight the topic within a historical context. Studies have been published that contain very specific and detailed information about nuclear strategy and doctrine, in particular the French case, as well as the British and American postures, including discussions of future developments. David Yost, the foremost American expert on French nuclear developments, has provided this writer with many of his own articles from French, American and NATO academic and professional journals. These articles discuss in detail the evolution of French nuclear doctrine and the pertinent implications and events that have helped shape French strategy and capabilities since the end of the Cold War. Along with this information, on-line sources offer an abundance of resources that discuss the many related issues that have shaped the doctrine as well as their practical applications, political and economic limitations, and commentary concerning the possible outcomes of new doctrine and the limitations and strengths of the deterrent strategy.¹⁴

¹⁴ For on-line information on French nuclear deterrence see, Pascal Boniface, "French Nuclear Weapons Policy after the Cold War," *The Atlantic Council of the United States* (August 1998), http://www.acus.org/docs/9808-French_Nuclear_Weapons_Policy_After_Cold_War.pdf (accessed September 15, 2006); Martin Butcher, Otfried Nassauer and Stephen Young, "Nuclear Futures: Western European Options for Nuclear Risk Reduction," *British American Security Information Council and the Berlin Information-center for Transatlantic Security (BASICBITS)* 98.6 (December 1998), <http://www.basicint.org/pubs/Research/1998nuclearfutures1.htm> <http://www.basicint.org/pubs/Research/1998nuclearfutures1.htm> (accessed September 09, 2006); Felix Arteaga, "French Nuclear Deterrence According to President Chirac: Reform, Clean Break or Reminder?" *Real Instituto Elcano*, (January 24, 2006), <http://www.realinstitutoelcano.org/analisis/905.asp> (accessed September 11, 2006); Oliver Meier, "Chirac Outlines Expanded Nuclear Doctrine," *Arms Control Today* (March 2006), http://www.armscontrol.org/act/2006_03/MARCH-chirac.asp (accessed September 12, 2006). Electronic copies of official speeches, interviews and statements by the French Defense Minister can be found at http://www.defense.gouv.fr/sites/defense/english_contents/the_ministry_of_defence/.

F. CHAPTER SUMMARY

1. Chapter II: France's Cold War Nuclear Deterrent Strategy, A Historical Review

This chapter will provide an overview of French nuclear development and strategy from its inception in the late 1950's through the end Cold War. The primary issues discussed will be General Charles de Gaulle's influence in shaping French nuclear doctrine and the legacy of this influence on subsequent administrations and nuclear strategy. The foundations and influences on French nuclear strategy will be highlighted and an overall analysis of nuclear strategy during the Cold War will be the main objective.

2. Chapter III: Evolution of French Nuclear Strategy beyond the Cold War

This chapter will outline the adjustments to French nuclear strategy following the Cold War to present day. An analysis of two speeches concerning nuclear strategy given by President Jacque Chirac will provide the impetus for determining France's current nuclear strategy and its justification and rationale. The primary goal of this analysis will be to highlight the continuities with previous Gaullist strategies and point out the evolutionary elements that have become a central part of France's nuclear doctrine.

3. Chapter IV: Viability of the French Nuclear Strategy

This chapter will give a broader assessment for the justification of French nuclear strategy based on an evolving and changing international environment. Within this context, the validity of nuclear deterrence in the post-Cold War will be discussed and its relevance will be established. Based upon the relevance of deterrence, an analysis of nuclear deterrence against state and non-state sponsored terrorism will attempt to show the validity of the French nuclear doctrine and the potential spill-over effects it may have on future deterrence capabilities. Additionally, weaker elements of the strategy will be addressed and specific technological and policy advancements will be indicated that may strengthen France's deterrent doctrine. An analysis of the ability and credibility of French doctrine will also be discussed which will provide further validity to the French Doctrine.

4. Chapter V: Conclusion

This chapter will provide an overview of the validity of the French doctrine and its relevance to the international situation. The primary focus will be to draw upon the relevant issues described in the paper to produce future policy and recommendations. Additionally, a brief section will discuss these relevant findings in relation the United States foreign policy and nuclear strategy.

II. FRANCE'S COLD WAR NUCLEAR DETERRENT STRATEGY, A HISTORICAL REVIEW

A. INTRODUCTION

After the defeat in 1940 and the agony of German occupation during World War II, then the subsequent defeat in Indochina in 1954 and in Suez in 1956, France's international political clout and stature had endured several severe set backs that left a deep imprint on domestic politics and international relations.¹⁵ This situation particularly held true for France's status within NATO, Europe, and the vanishing colonial territories. France's standing within international circles had taken a back seat to the politics of the era. Because of the bi-polar scenario which played out during the Cold War between the United States and the Soviet Union, second-tier countries such as France enjoyed much less attention and latitude of action. Additionally, the rearmament and economic recovery of Germany took center stage within the Alliance, and the fear of German hegemony within Europe loomed heavy in the French psyche. The result of these circumstances contributed to the fall of the Fourth Republic and helped usher in a new and more assertive Fifth Republic under the leadership of General Charles de Gaulle in 1959. Although de Gaulle is credited with the inception of the *force de frappe* (striking force), its origins date back to the turbulent early 1950s.¹⁶ During this time, "several politicians, officials, and military officers saw nuclear weapons as the key to restoring France's prestige and international political respect, and as the necessary

¹⁵ For further material on France's declining international status and the effects of these events, see Philip H. Gordon, *A Certain Idea of France* (Princeton, NJ: Princeton University Press, 1993); Wilfrid L Kohl, *French Nuclear Diplomacy* (Princeton, NJ: Princeton University Press, 1971); Anand Menon, *France, NATO and the Limits of Independence 1981-97* (New York: St. Martin Press, Inc., 2000). For an American perspective on the impact of these events on France's stature, see John Lamberton Harper, *American visions of Europe: Franklin D. Roosevelt, George F. Kennan, and Dean G. Acheson* (Cambridge University Press, 1996).

¹⁶ The term *force de frappe* was not an original phrase coined by General de Gaulle. It was first used by military planners during deterrent planning studies under French Chief of Staff, General Paul Ely in 1956. Although the term predates General De Gaulle, it became the generally accepted term used in the press for the French strategic nuclear forces. The official designation of the French nuclear force is *force nucléaire stratégique* which is also synonymous with *force de dissuasion (deterrent power)*.

prerequisite for an independent foreign policy.”¹⁷ These sentiments led to the initial steps toward a French nuclear capability and ultimately the development of a French nuclear program.

1. A Nuclear France: Inception of the *force de frappe*

The French nuclear program started during the Fourth Republic, immediately following World War II. The *Commissariat à L’Énergie Atomique* (CEA) was established as a civilian atomic energy agency in order to support the scientific and industrial application of nuclear power.¹⁸ It was not until 1954 that military applications for atomic energy were considered, but under the unpredictable and unstable nature of the political system of the Fourth Republic, no official directives were issued for a military nuclear program. Lower level technocrats and military officers led the development and studies of nuclear capabilities, without a clear mandate from the French government. Interest in military nuclear capabilities began to gain importance toward the end of the Forth Republic when “Moscow’s acquisition of long-range strategic missiles marked a sudden change in the strategic relationship of the United States and the Soviet Union by demonstrating the vulnerability of American territory to possible Soviet atomic attack.”¹⁹ No longer was America’s geographic location considered a safe haven. This meant that the United States’ willingness to provide a nuclear guarantee that protected Europe from a Soviet attack had become less credible and “increased the strength of French arguments for diminishing their country’s reliance on the American nuclear guarantee”.²⁰ Along with this strategic development, French thinking on nuclear armament was influenced by the famous 1957 British White Paper of Duncan Sandys which concluded, “There is no effective way to defend Great Britain except by a British nuclear deterrent.”²¹ The general crux of the argument was that the United States might not employ its nuclear

¹⁷ Wilfrid L. Kohl, “The French Nuclear Deterrent,” *Proceedings of the Academy of Political Science*. 29:2, (November, 1968), 81.

¹⁸ The Atomic Energy Commission was established in 1945 during the Forth Republic instituted to develop all applications of atomic energy, both civilian and military. The CEA is headed by the high-commissioner for atomic energy and by a board headed by the general administrator. It conducts fundamental and applied research into many areas, including the design of nuclear reactors.

¹⁹ Kohl, “French Nuclear Deterrent,” 81.

²⁰ Ibid., 81-82.

²¹ Kohl, “French Nuclear Diplomacy,” 40.

weapons in the event of an attack if the Soviet Union could directly attack the United States with reprisal strikes. These developments and the assessment of the British provided even further justification for a national nuclear program. Under the Fourth Republic (1944-1958), the vision of a national nuclear program “was to be used to bolster France’s security and political position with the NATO framework and not independently of it as General de Gaulle later directed.”²² In the interval, however, the Suez disaster in the fall of 1956 devalued such an alliance oriented nuclear concept and opened the door to a radical change of policy that took shape with the Fifth Republic two years later. The answer was re-nationalization of defense.

It was not until the spring of 1958 and the inception of the Charles de Gaulle Presidency that a fully recognized and supported nuclear program began to take shape. From the fall of 1958 until the end of 1960, and the first successful nuclear test, de Gaulle strongly supported the development of a nuclear program and made it a top priority for his government. After a lengthy and heated political debate between opposition parties, and subsequent rejections of the program by the Senate, the nuclear program became law on December 6, 1960, despite failing to receive an absolute majority vote as laid out in the Constitution of the Fifth Republic. As a top CEA official remarked, “the advent of the Fifth Republic transformed the character of French atomic development by the decision of the government to give priority to the first bomb, but also to a true program of studies and, later on, to the production of perfected atomic weapons.”²³ Although a consensus on the program was far from being reached, the French nuclear program had been officially born and enacted into a governmentally sanctioned program. The authorization of the nuclear program and the successful nuclear test laid the foundation for the diplomacy that General de Gaulle would use to influence international politics.

2. “Grandeur” and Independence: Revival of French Power in Europe at the end of the 1950s

Any discussion on French nuclear strategy would be incomplete without first some generalization about the role that national independence and *grandeur* has played in the development of French strategic thought within the trans-Atlantic system of states

²² Kohl, “French Nuclear Deterrent,” 82.

²³ Kohl, “French Nuclear Diplomacy,” 82.

since the late 1940s. These two elements stem from a French strategic culture deeply imbedded in history coupled with a personal obsession of de Gaulle which has had a lasting legacy in French society and national security policy until the present. Such policy was that of those French who refused to accept the putative judgment of the mid-twentieth century that France was damned to an ancillary role in the fate of Europe and its former empire. Such policy reflected an attempt to use the ideal and application of power as a means to heal the domestic rupture that had burdened French politics since the mid-1930s and to assert the rank of France in the face of a revived West Germany, as well as a UK linked with the US. *Grandeur* for the French citizen means greatness and prestige within the context of great projects, or “*vastes entreprises*”.²⁴ According to Philip Gordon, “the French feel they are destined to play leading global and European roles and are loath to renounce them.”²⁵

The concept of *grandeur* emanates from the French experiences during the Barock period, as well as the Enlightenment and the imperial heritage in the late 1800’s and early 1900’s, in which “for more than two hundred years, (since the French revolution, if not since the time of Louis XIV) the idea of playing the role of *nation phare* had tempted the French, and history had given them a sense of national importance in international affairs,” as indicated by Gordon in his book *A Certain Idea of France*.²⁶ Striving for *grandeur* and political prestige has imbedded itself in the consciousness of French politics. Notwithstanding the events of the Second World War, this theme has been a constant in French political culture and remains into the twenty-first century. The idea of *grandeur* and its significance within French politics became a central theme for General de Gaulle in the early 1960s, and a cornerstone of his strategic vision and justification for a French nuclear program until 1969 and thereafter. However, prestige and *grandeur* within an international system also requires a level of independence which enables a nation to take autonomous action. The manner in which the makers of U.S.

²⁴ Kohl, “French Nuclear Diplomacy,” 127; Gordon, “Idea of France,” 18; Menon, “Limits of Independence,” 16.

²⁵ Gordon, “Idea of France,” 17.

²⁶ Ibid., 18.

policy had slighted the French from 1940, but especially in the late 1940s and early 1950s bulked large in such an idea.

Granted this policy, independence was a prerequisite for *grandeur*. As Gordon points out, “the two notions can be analyzed together not because they are interchangeable but because they were so integrally related to one another.”²⁷ The general feeling within France after World War II was that France had lost some of its independence and become dependent on the United States and later NATO for its security. In no small part, the events of World War II left the French politically and militarily dependent on an Anglo-Saxon alliance which continued to reduce the status of France in the international system. This scenario was in stark contrast to the “golden years” of French power in the reign of Louis XIV, in the revolutionary and Napoleonic period as well as at the height of the imperialist period in Africa and Asia until 1914. In the French mind, “France had a special right and duty to play the role of a world power simply because it was France.” In order completely to realize this goal, it was dependent upon France’s ability to act independently in international affairs. Accordingly, this independence could not be attained if others provided for the security of France or influenced its policies. As the British scholar Anand Menon indicates:

France could only aspire to *grandeur* if it exercised ultimate control over its own foreign policy. National independence, in other words, constituted an essential basis of the quest for international standing. Independence required France to remain free of any kind of ‘subordination’ that could prevent the decision-making bodies of the state from basing their decisions primarily on a consideration of French interests.”²⁸

Arguably, the interests of the Anglo-Saxons were not necessarily the interests of France, and this simple fact detracted from France’s ability to act independently. Independence therefore became intertwined with *grandeur* as a necessary component and guiding principle for the French state. These nationalistic sentiments became the backbone for the Gaullist vision of France and the primary reasoning behind nuclear ambitions and policies during the Cold War.

²⁷ Gordon, “Idea of France,” 18.

²⁸ Menon, “Limits of Independence,” 17.

3. Nationalism on a Nuclear Level

Grandeur and independence in the French case predate de Gaulle himself, but these two notions were central in the case of the French nuclear program at the beginning of the Fifth Republic in the late 1950s. De Gaulle resurrected these notions and developed them into a vision unique to France in the 1960s and his ideas have shown remarkable durability long after his death, despite a radically changed international environment. This vision stemmed from the experiences de Gaulle made during the inter-war years and World War II combined with his belief that the nation-state was the fundamental unit in world politics. For de Gaulle, the nation-state was the only entity which could represent the people because it was the only political community that would serve the interests of society.²⁹ Gordon points out the result of these beliefs and experiences when he states:

He [de Gaulle] had seen the extent to which dependence on Great Britain had cost France between the two world wars when a lack of British support and diverging British and French interests had constrained France and led to her demise. It was thus not surprising that the post World War II dependence on the United States evoked bitter memories and not surprising that de Gaulle, the statesman, pursued uniquely national goals first.³⁰

These viewpoints stood out in de Gaulle's presidency and his international politics, particularly with the issue of nuclear armament. So much so, that they could be considered the primary justification for a French nuclear arsenal which would then solidify independence. Speaking about nuclear weapons, and alluding perhaps to the secondary status of Germany, de Gaulle highlighted the essential nature of nuclear arms in the Cold War era: "a great state which does not possess them, while others have them, does not dispose of its own destiny."³¹ Clearly de Gaulle realized that in order for France to be taken seriously within the Atlantic Alliance, or the rest of the world for that matter, he needed an independent policy. Understandably, for de Gaulle, nuclear weapons became the cornerstone of national power and an indispensable ingredient and political

²⁹ Kohl, "French Nuclear Deterrent," 85.

³⁰ Gordon, "Idea of France," 17.

³¹ Kohl, "French Nuclear Deterrent," 85.

instrument in the quest for *grandeur*, the fundamental objective of his foreign policy.³² In the search for *grandeur*, an independent French nuclear force provided the foundation for an independent foreign policy. De Gaulle successfully combined these nationalist sentiments with the desire for a nuclear force, the result being French nationalism built on the foundations of nuclear capability.

From its inception during the de Gaulle presidency in 1958, the French *force de frappe* had a strong political focus which aimed not only to provide security for France but more importantly to gain international political clout as well as to serve a source of national pride that would eradicate domestic political divisions that had endured from the 1930s into the 1960s. This is not to say that strategically France's nuclear program was insignificant, but more accurately that the political goals strongly shaped the nuclear program. T. V. Paul supported this assessment when he wrote:

France especially acquired nuclear weapons on the conviction that these capabilities would endow them with a major say in the security affairs of allies and adversaries alike. Although the declared purpose of nuclear capability was a mini-deterrant against the Soviet threat, the larger rationale for nuclear acquisition was political in character. They believed that by developing a nuclear capability, they would gain strategic independence from the United States and insurance in case Washington did not live up to its security promises.³³

Therefore, nuclear weapons would provide the means to gain increased political influence compared to non-nuclear states and guard against the possibility that the United States would not provide an umbrella of protection for France. According to Thomas Freedman, “the French characterized the US nuclear guarantee as being a flimsy foundation for security, much inferior to a national effort.”³⁴ De Gaulle recalled with bitterness instances of perfidious British and U.S. behavior as concerned alliance cohesion during the past war and in the wake of the wars of colonial succession in Indochina and North Africa. The quest for nuclear independence and a widening rift in the trans-Atlantic alliance relationship and NATO would result in France’s complete shift

³² Kohl, “French Nuclear Deterrent,” 85.

³³ Paul et al., “Absolute Weapon,” 33.

³⁴ Freedman, “Evolution of Strategy,” 298.

toward an independent and national nuclear force separate from the Anglo-Saxons, i.e. the British and the U.S.

De Gaulle had been critical of the Fourth Republic's acceptance of the United States dominion over European affairs and France's dependency on them for her security. The Fourth Republic, "whilst anxious to ensure an American presence in Europe to counter the Soviet threat...attempted to secure a leading role for France within the nascent Atlantic Alliance. They did so not least because the experience of the period between 1947 and 1949 had made them wary of the prospect of exclusion from what was increasingly perceived as 'Anglo-Saxon' club directing western security affairs."³⁵ However, the hope of increasing France's influence within the Alliance had been diminished by the action of both the American and the British during the creation of NATO in the period 1948-50. As Menon points out, "France was excluded from the initial negotiations concerning the creation of the Atlantic Alliance, as London and Washington expressed fears that communist sympathizers in the French administration could leak their details to the Soviet Union."³⁶ Although France continued to insist on a tri-partite leadership role consistent with Article IX of the Treaty, British and American efforts continued to marginalize France's influence creating a bitter resentment toward Anglo-Saxon bias in the security interests of Europe. This resentment and the unease created by greater and greater American influence continued to increase tensions within the Alliance. These tensions reached a boiling point during the Suez crisis of 1956 when the United States abandoned support for British and French policies in the region and the Eisenhower administration openly forced a cease-fire on British and French forces through economic and political maneuvering. For the French, "the American actions during the crisis heightened French doubts about the reliability of the U.S. as an ally and increased frustration with an Alliance, which, as Paris saw it, was run by the Americans on the basis solely of their own interests."³⁷ The continuing decline of French and Anglo-Saxon relationships within the alliance would further influence General de Gaulle

³⁵ Menon, "Limits of Independence," 8.

³⁶ Ibid.

³⁷ Ibid., 9.

as he became president of the new Fifth Republic and set out on a course of open and assertive criticism of NATO and its lack of support for French interests.

As President, de Gaulle continued his attacks and criticism on NATO and its strategy. Speaking at his first Defense Council meeting in 1958 he commented:

Our place in the NATO organization must be reconsidered. The Americans enjoy an overwhelming number of commands in the organization. We are the victims of a completely unacceptable discrimination...We are completely left to one side when it comes to drawing up the plans for the SAC and the British bomber Command. [SACEUR] possesses military assets over whose use we have no say whatsoever. We cannot accept such exclusivity concerning nuclear war, especially because our territory would be used.³⁸

Though, critical of NATO and American dominance in security affairs within Europe, de Gaulle maintained interest in nuclear assistance and cooperation with the United States on the emerging French nuclear program. According to Wilfrid Kohl, “when he (de Gaulle) raised this subject at an early meeting with Secretary of State John Foster Dulles, the latter explained that France did not qualify for such assistance under the terms of the 1958 amendments to the McMahon Act.”³⁹

Not surprisingly, the rejection of American nuclear support and the marginalization of French interests with the alliance prompted de Gaulle to take action in the form of his now famous September 1958 memorandum to President Dwight Eisenhower. In the memorandum he proposed an Anglo-French-American triumvirate to consult on global strategy and nuclear issues at the time of the Algerian war and the incipient nuclear sharing with the West Germans under SACEUR Lauris Norstad’s dual

³⁸ Menon, p. 10; A prime example of the lack of French control and input in NATO planning was illustrated during a meeting between SACEUR General Lauris Norstad and French President de Gaulle discussing the details of the deployment of NATO forces in France. President de Gaulle asked to discuss the issue with Norstad in which the following transpired: “Norstad agreed, and made an extremely brilliant exposition with his inter-allied staff in attendance. After congratulating him, the head of the French government asked the American general for a precise account of the deployment of nuclear weapons in France and of the targets assigned to them. Norstad: ‘Sir, I can answer only if we are alone.’ ‘So bet it,’ said de Gaulle. The two staffs withdrew. ‘So then?’ ‘Then, sir, I cannot reply to your questions, to my very great regret...’ And de Gaulle in conclusion: ‘General, that is the last time, and make yourself understand it, that a responsible French leader will allow such an answer to be made.’” Robert S. Jordan. *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin’s Press, inc., 2000), 122.

³⁹ Kohl, “French Nuclear Deterrent,” 82.

use policy.⁴⁰ This directoire would have undermined the NATO alliance, especially the FRG. The memorandum threatened the curtailment of France's NATO participation until the committee was established and the terms of the memorandum met. It proposed "a pooling of atomic secrets and technical resources and the establishment of combined commands for operational theaters throughout the world. De Gaulle also demanded, in effect, a veto right over the use of Anglo-Saxon nuclear weapons anywhere on the globe."⁴¹ Needless to say, de Gaulle's efforts were ineffectual and rejected by the United States. Only limited consultation between France, Britain, and the United States arose from the memorandum. According to Menon, "there is good reason to believe that this failure led the General to consider a fundamental re-evaluation of French relations with NATO."⁴² These sentiments ultimately led de Gaulle to begin a phased pull-out of French forces from NATO's integrated military structure in March 1959, first with the removal of elements of the French Navy from the integrated structure. NATO's shift toward the strategic concept of Flexible Response, French interests once again seemed subservient to British and American interests. The French came to believe that the NATO emphasis on a conventional build-up in central Europe to raise the nuclear threshold with Flexible Response after 1961, was tantamount to the same kind of abandonment of continental Europe as had transpired when the RAF withdrew aircraft from the battle of France; when the U.S. had abandoned Strasbourg in 1944; when the British and U.S. had failed to relieve Dien Bien Phu in 1954 and so on. According to Menon, "de Gaulle used such developments as evidence that not only was NATO unfairly dominated by the Americans, but that the latter, by raising the nuclear threshold, were reducing the reliability of their guarantee to Europe."⁴³ Meanwhile, the French nuclear program continued to make progress and with its readiness assured, President de Gaulle, in February 1966, deeply dissatisfied with France's position in NATO and Anglo-Saxon dominance, announced the final measures (i.e. the closure of U.S. facilities in France and the NATO headquarters, as well) to withdraw from the integrated military structure,

⁴⁰ Jordan. "Norstad," 120-123.

⁴¹ Kohl, "French Nuclear Deterrent," 82.

⁴² Menon, "Limits of Independence," 11.

⁴³ Ibid., 11.

while enabling France to pursue an independent strategy and autonomy within Europe.⁴⁴ During the press conference announcing the withdrawal, “he emphasized that, whilst remaining loyal to the Atlantic Alliance, France felt that NATO no longer fulfilled its role and represented a dangerous constraint.”⁴⁵ With this strategic autonomy, France developed a nuclear deterrent strategy with four primary objectives which fit into its desired political and strategic goals as well as their economic and technical constraints. These objectives were preventing war, primarily deterring major-power threats; maintaining national independence and decision-making autonomy; protecting the nation’s vital interests; and making an indirect contribution to the security of France’s allies.⁴⁶ Each of these goals and the political and military foundations of the nuclear program were shaped by French thinkers who sought to expand nuclear deterrence theory and build upon France’s unique strategic situation.

B. FRENCH STRATEGIC THOUGHT AND NUCLEAR STRATEGY

Apart from the political aspects of France’s nuclear ambitions, strategically France maintained a distinctive and autonomous doctrine, in contrast, to say, the U.K. and West Germany. In very general terms, French nuclear deterrence throughout the Cold War could be characterized as a minimal deterrent which relied heavily on counter-value targeting against population centers, an “anti-cities” strategy. Such a policy had been considered in the U.S. as well, but eschewed in favor of overkill and nuclear plenty in the face of perceived Soviet strengths, also because of the inherent prolificacy of the U.S. defense system in the late-1950s and early-1960s (i.e. the missile gap). Due to its economic, political, and technical restraints, France was limited in its ability to compete in sheer numbers of weapons and targeting capabilities with either the United States or the Soviet Union. This strategy was also driven by the limited accuracy and delivery capabilities of French nuclear weapons. Only a small portion of the enemy order of battle would be destroyed in a conflict and such a counter-force strike would initiate an immediate retaliatory strike. Writing in *Défense Nationale*, Guy Lewing expanded on the rationale behind this doctrine when he surmised:

⁴⁴ Menon, “Limits of Independence,” 12.

⁴⁵ Ibid.

⁴⁶ Sokolski, “Getting Mad,” 207.

We aim at the adversary's cities because these targets are easy to reach, without great accuracy in the missiles required, and especially because one can thus cause important damage with a limited number of weapons. . . . It is only in the framework of an anti-cities strategy that the desirable level of damage can be guaranteed with the means that remain in proportion to the scientific, industrial, and economic possibilities of France. Any other strategy would necessitate much more important means, without doubt beyond our reach, and could not but weaken deterrence.⁴⁷

Two retired French Generals, Pierre Gallois and André Beaufre, were influential in building the foundations for French strategic thought throughout the early years of the *force de frappe* and this influence continues today.⁴⁸ These principles had two distinct characteristics. First, they opposed the dominant trends in American strategic thought. Second, no similar plan emerged from British strategists who were seen to be in a like situation as France.⁴⁹ The themes of these theories have resonated throughout French nuclear doctrine and influence general de Gaulle's vision of independence and nuclear autonomy.

1. The Theories of General Gallois

General Pierre Gallois articulated several of the concepts and strategies which later became prevalent in the initial French nuclear doctrine. Gallois strategic theories were based on his views concerning the fundamental change in warfare that nuclear weapons had created and several convictions about the nature of western democracies and alliances. Many of these convictions were similar to those of General de Gaulle and were influential in shaping diplomatic policy and justification for the French nuclear program. Additionally, many of Gallois' theories shaped nuclear doctrine and became foundational principles for the French arsenal. Ultimately, he developed an idealized logic of "pure" deterrence in which smaller nuclear powers could deter larger ones. Some of these theories consequently paralleled and influenced de Gaulle's strategic

⁴⁷ Sokolski, "Getting Mad," 204.

⁴⁸ The works of both strategists have been widely translated and published. For material on their theories see, Pierre Marie Gallois, *The Balance Of Terror: Strategy For The Nuclear Age* (Boston: Houghton Mifflin, 1961); idem., *Soviet Military Doctrine And European Defence: NATO's Obsolete Concepts* (London: Institute for the Study of Conflict, 1978); André Beaufre, *Deterrence and Strategy* (New York: Praeger, 1966); idem., *An Introduction to Strategy, With Particular Reference to Problems of Defense, Politics, Economics, and Diplomacy in the Nuclear Age* (New York: Praeger, 1965); idem., *Strategy for Tomorrow* (New York: Crane, 1974); idem., *Strategy of Action* (New York: Praeger, 1967).

⁴⁹ Freedman, "Evolution of Strategy," 298-299.

thinking and can be seen as guidelines for French strategy which have had broad and considerable longevity.

a. Nuclearization: Fundamental Changes in the Nature of War

In his earliest writings, Gallois emphasized the revolutionary changes in strategic thought that the advent of nuclear weapons imposed on possessors and non-possessors of nuclear weapons. According to his theories these changes had a profound impact on the underlying justification for nuclear weapons. In parallel with Gaullist thoughts on nuclear weapons, Gallois felt that “those who possess nuclear weapons ‘hold the trump card for an active policy’. Their allies had to be more cautious, and those without weapons or the prospect of a useful alliance were neutralist.”⁵⁰ Gallois believed that “a nation with nuclear weapons, so long as they could deny the enemy the ability to destroy his retaliatory capacity, enjoyed ‘self-protection’, for no aggressor would launch an attack while there was a risk of serious retaliation.”⁵¹ Gallois believed in the ability to develop such a retaliatory capability and this belief led to the development of his strategic theories. However, this belief also spawned several concerns for Gallois that would need to be addressed in order to produce a viable strategy and nuclear deterrent.

The advent of the nuclear age, according to Gallois, profoundly changed the dynamics of war itself. He was steadfast in his conviction that conventional might and deterrence were obsolete and would ultimately result in an escalation toward general nuclear war. Based on this assumption he questioned the resoluteness and credibility of Western democracies and alliances. His primary concern was that due to the increased pace of warfare and its eventual escalation, the use of nuclear weapons was unavoidable and the readiness of democracies to accept this eventuality was dubious. In 1956 Gallois speculated, “in the event of a crisis, the allied nations, if they want to survive ought to rely on the resolution of the men charged with their defense...We are approaching the time when the menace will move faster than a mind can be made up.”⁵² His problem with Western democracies and their alliances was that they “were not made of stern

⁵⁰ Freedman, “Evolution of Strategy,” 299.

⁵¹ Ibid.

⁵² Ibid.

enough stuff.”⁵³ For Gallois this brought into question the ‘will’ to support the principles of a valid nuclear deterrence and the resoluteness to be able to do what was necessary. According to Gallois:

In principle, a determined policy of deterrence could solve all Western military problems. If the potential assailant believed that even on the occasion of a conflict of secondary importance to himself, the opposing side would not hesitate, rather than surrender, to use its nuclear arsenal, he would have to abandon force as a means of persuasion.⁵⁴

Without the ‘will’ to uphold such a deterrent policy, Gallois believed that credibility was derived from political will and held the only means by which to gain the deterrent effect and fill this gap. However, the problem with credibility was that it resided in the mind of the beholder rather than the one trying to create the impression for others. In the pre-nuclear age credibility could be gained from past military performance. However, this did not exist in the nuclear age and speculation on future reactions was difficult to demonstrate against an adversary. Gallois’ answer to this problem was to demonstrate a recklessness bordering on irrationality which would create a bluff. However this bluff would be difficult to sustain. Another answer was to base reactions on what would be at stake, but even this would be difficult to rationalize in relation to national interests. The one point that could be supported was that retaliation was more likely following an attack on nation’s interests rather than on an allied party.⁵⁵ For this reason, Gallois believed that the nation-state provided the only realistic means to respond to an attack, rather than an alliance. Gordon points out that, “because the process—or better yet the threats—just described were based on matters of life and death, human and national, they could only be executed in a national context.”⁵⁶ Given these beliefs, Gallois developed his most influential concepts and ones that would be the backbone of French strategic thought for the remainder of the Cold War.

⁵³ Freedman, “Evolution of Strategy,” 300.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Gordon, “Idea of France,” 58.

b. The Nation-State and ‘Proportional Deterrence’

Gallois’s two most influential strategic theories became acknowledged and official elements of French policy. The first of these strategic visions played a major role in the justification of the French nuclear arsenal and virtually mirrored de Gaulle’s reasoning for the attainment of nuclear weapons. Philip Gordon described Gallois concept as follows, “in an age of ballistic missiles, when all countries, large and small, are vulnerable to the thermonuclear destruction of their potential adversaries, no country—even the powerful United States—could be expected to engage in nuclear war for another.”⁵⁷ Subsequently, this concept became one of the primary arguments in support of a national nuclear program. As technology improved and nations could be attacked regardless of their geographic location, the “nuclear risks” outweighed the benefit. Therefore, the responsibility for a nation’s security in the nuclear age could not be shared, and the nation-state provided the most reliable means to protect its own interests.

The second strategic theory, ‘*proportional deterrence*’, conceptualized by Gallois became the foundation for the French nuclear strategy. In its simplest form, the theory provides for the deterrence of a large nuclear power by a smaller nuclear power. Gallois, in his influential work *Balance of Terror*, explained his theory as: “The thermonuclear force can be proportional to the value of the stake it is defending.”⁵⁸ In essence the theory was based on a cost-benefit analysis in which the cost of an attack would not be worth the benefit of the target or territory. Kohl clarifies this assessment when he states, “the basis of the theory is that a nation with a small atomic force can deter a great power (even though the latter has a far superior nuclear capability) because the amount of damage which even a small nuclear force could inflict would exceed the value to the great power of taking over or destroying the smaller state.”⁵⁹ Although several criticisms of this theory have been noted, it nevertheless was accepted by de Gaulle and the Fifth Republic as the most realistic means of deterrence at the time,

⁵⁷ Gordon, “Idea of France,” 58.

⁵⁸ Quoted in Freedman, “Evolution of Strategy,” 300.

⁵⁹ Kohl, “French Nuclear Deterrent,” 87.

allowing the French to move forward with their nuclear program.⁶⁰ Additionally, the theory fit nicely with de Gaulle's desire for an independent and autonomous nuclear strategy that was free of security ties to either the United States or Great Britain.

2. The Theories of General Beaufre

General André Beaufre had a much different views on nuclear deterrence than Gallois. He did not share Gallois' conclusions on 'proportional deterrence' and the decline of Massive Retaliation nor did he necessarily disagree with Flexible Response.⁶¹ His theory revolved around the political and psychological impact that nuclear weapons produced and the stability that this effect could have on superpowers and alliance networks associated with them. Compared to Gallois, Beaufre focused his theories on the "new and distinctive requirements imposed by a strategy of deterrence and the role he saw for local nuclear forces with this strategy."⁶² He developed a deterrence theory based on model building that would prevent an enemy from making the decision to use armed force. The result of this theory was a psychological deterrent created by "the combined effect of a calculation of the risk incurred compared to the issue at stake and of the fear engendered by the risks and uncertainties of conflict."⁶³ In order to attain this deterrent fear, Beaufre intertwined the national nuclear capability of European countries with alliance strength to produce a "multilateral deterrence." His sophisticated theory maintains parallels with French thinking of the mid-1960's and was influential on Gaullist thought as France tried to maintain some alignment with NATO during the Cold War.

a. Independent Nuclear Powers and "Multilateral Deterrence"

Unlike Gallois, Beaufre was not averse to coordination with alliances such as NATO. Quite the contrary, he felt that France's independent nuclear contribution added a beneficial and important piece to the strength of the alliance. The basis for this assessment had its origins in Beaufre's conclusion that the balance created by the two

⁶⁰ For a thorough critique of the de Gaulle strategy, see Lawrence Freedman. *The Evolution of Nuclear Strategy* (New York: Palgrave Macmillan, 2003): 305-309.

⁶¹ Freedman, "Evolution of Strategy," 302-303.

⁶² Ibid., 303.

⁶³ Ibid.

superpowers had actually reduced the credibility of nuclear deterrence. As Kohl indicates, “Beaufre’s principle concern was that nuclear deterrence in Europe had become too stable, in view of the deterrent strength of NATO and the evolution that had led to less aggressive policies in the Soviet Union.”⁶⁴ Due to this stability Beaufre concluded that “the threat of using nuclear weapons over a conflict in Europe had lost credibility for either superpower,” and he argued that “the uncertainty of a possible nuclear confrontation should be steeped up through the addition of other independent centers of nuclear decision-making.”⁶⁵ In a 1965 article, Beaufre supported his theory and proposed that a level of *uncertainty* needed to be established to regain credible nuclear deterrence when he pointed out, “everything possible should be done to ensure that the threat should retain that minimum of spontaneous risk which leads to that prudence indispensable to the maintenance of peace.”⁶⁶

In order to create this *state of uncertainty* he proposed a coordinated framework of “multilateral deterrence” that would use several different methods and centers of decision-making simultaneously to destabilize the nuclear threat and increase deterrence. His motivation lay in increasing the solidarity of the Alliance and thus increasing the deterrent capability; in essence France’s nuclear deterrent would increase the deterrent strength. Lawrence Freedman wrote:

Beaufre’s response to the growing incredibility of threats of nuclear retaliation was not to assert the greater plausibility of a purely national response or that conditions could be created in which a single decision on activating the deterrence threat could be made rational. He could not even demonstrate how a multiplicity of decisions made nuclear use more likely, only that it added complexity to the enemy’s calculations. The impact was felt through the psychology of uncertainty rather than the logic of certainty. It was a threat that left a lot to chance, based on the danger of a situation getting out of control. In this it was completely at variance with McNamara’s attempts to establish a capacity for measured escalation with every step under centralized control.⁶⁷

⁶⁴ Kohl, “French Nuclear Diplomacy,” 155.

⁶⁵ Ibid.

⁶⁶ Quoted in Freedman, “Evolution of Strategy,” 303.

⁶⁷ Ibid., 304.

The cornerstone of Beaufre's argument, and a major departure from Gallois, was that nuclear credibility was enhanced by not acting alone, “that France's tiny deterrent was most likely to work but only in the context of an alliance with a stronger nuclear power.”⁶⁸ Therefore, a strategic relationship between two nuclear powers was preferable in that a middle nuclear power such as France could contribute to the overall force while simultaneously protecting national interests and providing a voice in international affairs, so long as its nuclear capability was sufficiently credible. According to Gordon, “the stable nuclear balance of the superpowers had taken away the uncertainty necessary for effective Western deterrence; France's additional ‘center of nuclear decision’ would bring it back. By ‘intruding’ into a situation of bipolar nuclear equilibrium, the third party could have ‘strategic consequences out of all proportion to the [its] nuclear strength.’”⁶⁹ Although Beaufre's theory of “multilateral deterrence” was not supported by official French statements, it nevertheless had an influential impact on French strategy and its rationale.

b. The French Nuclear “Trigger”

One of the problems with the concept of “multilateral deterrence” was finding an appropriate mechanism in which the French nuclear force could be incorporated into a grander strategy. From the logic of Beaufre's theory arose the concept of a “nuclear trigger” in that France could be seen as a detonator for the NATO and American arsenal. Wilfrid Kohl provides a theoretical scenario which helps explain this concept:

If the Soviets threatened or actually began an invasion, France would threaten to use her atomic force. Moscow would probably counter threaten the annihilation of France with Soviet missiles. This, it is contended, would force the United States into a declaration of solidarity with France, if one had not been forthcoming already. The uncertainty of this kind of chain of events actually occurring would be enough to deter the Russians from any attack, or threat of aggression. Thus, deterrence in Europe is actually strengthened by the presence of the French atomic force.⁷⁰

⁶⁸ Gordon, “Idea of France,” 60.

⁶⁹ Ibid.

⁷⁰ Kohl, “French Nuclear Diplomacy,” 154.

This controversial concept was seen by many as the only role that France could play within the nuclear strategy of the Alliance. According to Raymond Aaron, surely one of the keenest thinkers about policy and nuclear war in post-war France, “the threat, though not explicit, of using the French atomic force as a detonator is its sole conceivable deterrent function within the framework of the present Atlantic organization.”⁷¹ This sentiment was held primarily by American strategists who saw this as a more realistic relationship compared to the unclear concept of “multilateral deterrence.” The American strategist Stanley Hoffman supported this notion, as he understood it, with his assessment that “the mere presence of an independent French nuclear threat would be a sort of ‘preventive trigger’ that would prevent the nuclear trigger from ever having to be pulled.”⁷² However, according to Gordon, “Beaufre himself always avoided the explicit argument that the French nuclear force could act as a ‘trigger’ for the American one, but the notion was implicit in his analysis. Indeed, it was difficult to imagine the mechanism by which multilateral deterrence would work if not via the nuclear trigger.”⁷³

The drawback for the nuclear trigger option was the disastrous consequences that Europe would endure if deterrence failed. Although never an official French strategy it did have resonance in the Fifth Republic. The political, rather than military utility of the concept was pointed out by Gordon when he stated it was “an early form of ‘coupling,’ the tying together of American interests with European ones. Its goal, like that of deterrence in general, lay ‘not in the actual employment of nuclear weapons but simply in the utilization of their threat.’ Thus, the French force need not—indeed, must not—actually be a detonator for an American strategic launch but had only to remind the Russians in advance of the possibility of American support for France.”⁷⁴ Although not necessarily advocated by Beaufre in his theory, the “nuclear trigger” provided the mechanism by which France increased *uncertainty* for the Soviet Union thus complicating the strategic calculations and multiplying the risk of attack or invasion.

⁷¹ Freedman, “Evolution of Strategy,” 304; also see, Raymond Aron, *The Great Debate*, (New York: Doubleday, 1965).

⁷² Gordon, “Idea of France,” 61.

⁷³ Ibid.

⁷⁴ Ibid.

3. Gaullist Strategic Thought

As president of the newly formed Fifth Republic and the man most responsible for the *force de frappe*, de Gaulle was more of a grand strategist than a figure on the cusp of strategy at the operational level of war. De Gaulle supported the development of the French nuclear arsenal in order to increase national independence rather than for operational purposes in a narrow sense alone. As indicated in earlier assessments, nuclear weapons became the central instrument of de Gaulle's foreign policy and the means to regain *grandeur*. Ultimately responsible for French strategy, de Gaulle's political objectives were much more important than the intricacies and nuances of nuclear doctrine and the formulation of theory, and his reliance on the theories of early French strategist such a Gallois and Beaufre seemed to be limited, although elements of their theories were prominent in the overall strategy. As Freedman points out, "He does not appear to have been influenced by his country's strategic theorists."⁷⁵ Wilfrid Kohl corroborates this assessment when he said, "de Gaulle himself has emphasized the broad political purposes of his atomic force and has, for the most part, left the strategic arguments and the development of a strategic doctrine to his military officers. In the mind of the general the political purposes of the *force de dissuasion* appear paramount."⁷⁶ However true this may be, ultimately de Gaulle did produce a strategy that was driven more by circumstance rather than lofty theory.

a. *Driven by Circumstances: The "Anti-Cities" Strategy*

At the beginning of the nuclear program and the height of the Cold War, de Gaulle was limited by the technological deficiencies of a new nuclear program and a relatively small conventional force. As Gordon points out:

Without serious conventional forces, any sort of flexible response, or even meaningful 'pause' or 'firebreak,' was excluded. Without the second strike capability afforded by invulnerable nuclear submarines or highly dispersed missiles, any counterforce alternatives to the threatening of Soviet cities were inconceivable. With no tactical nuclear weapons, even a 'warning shot' to announce an impending strategic response was not in the range of options for the French. Under these conditions, only a 'pure'

⁷⁵ Freedman, "Evolution of Strategy," 305.

⁷⁶ Kohl, "French Nuclear Deterrent," 85.

strategic deterrent, based on the threat of a massive nuclear strike against the Soviet population, was logically possible for France.”⁷⁷

Embedded in this analysis is the foundation for de Gaulle’s strategy. Given the limited resources, the only valid target would be population centers. De Gaulle did not argue for counterforce targets or warning shots. For de Gaulle, “the ‘*anti-cities strategy*’ was the only one that could be truly deterrent.”⁷⁸ However, contrary to Freedman and Kohl’s assessment of de Gaulle’s theoretical influence by Gallois and Beaufre, it is undeniable that some of the concepts developed by these theorists did influence de Gaulle and are evident in official statements defining French strategy, the most obvious of these being that of Gallois’s “proportional deterrence” and to a lesser extent Beaufre’s “multilateral deterrence” and the concept of a “nuclear trigger.” In any case, it must be noted that there is no single government source or documentation for French strategic doctrine; it therefore must be extrapolated from official statements of the President or his government officials. In a July 1964 press conference, de Gaulle’s acceptance of proportional deterrence was illustrated in his comment:

We are in a position to think that five years from now our deterrent means will reach a total instantaneous power of 2,000 Hiroshima bombs...The field of deterrence is thus henceforth open to us. For to attack France would be equivalent, for whomever it might be, to undergoing frightful destruction itself. Doubtless the megatons that we could launch would not equal in number those that Americans and Russians are able to unleash. But, once reaching a certain nuclear capability, and with regard to one’s own direct defense, the proportion of respective means has no absolute value. Indeed, since a man and a people can only die once, the deterrent exists provided that one has the means to wound the possible aggressor mortally, that one is very determined to do it and that the aggressor is convinced of it.⁷⁹

De Gaulle accepted Gallois’ “fragment of truth” that a minimal nuclear threat was capable of deterring a greater power and focused this concept toward population centers which were the most vulnerable and lucrative targets.

⁷⁷ Gordon, “Idea of France,” 57.

⁷⁸ Freedman, “Evolution of Strategy,” 309.

⁷⁹ Kohl, “French Nuclear Diplomacy,” 152.

b. The Gaullist “Initial Safeguard”

As the nuclear program progressed and the political realities of the alliance further marginalized France, de Gaulle continued to try and adjust his position within NATO. It is here that de Gaulle incorporated the concepts of Beaufre into the rhetoric of nuclear diplomacy for which de Gaulle was so keen. Although Beaufre’s theory of “multilateral deterrence” and “nuclear trigger” were never officially sanctioned elements of French strategy, nonetheless reference to this idea did make its way into the French strategic mindset, as noted by Kohl, when, “in a speech in 1964 at Strasbourg, de Gaulle spoke of the desirability of establishing a European defense system in order to assure ‘the *initial safeguard* of the Old Continent,’ implying that the United States would have to come to the rescue in case of a major conflict.”⁸⁰ This would imply that some sort of alliance and strategic planning would need to exist in order to ensure this outcome. But for de Gaulle, the idea of France’s weapons as a “trigger” decreased its legitimacy as a deterrent and it would be difficult for de Gaulle to portray France as an independent force if there was a relationship in which France was dependent on NATO or the United States. But, as Gordon points out:

De Gaulle never rejected the notion of alliances, and because he always counted on the insurance of the American protectorate, he can probably be assumed to have counted in part on the “trigger” effect. The general may have refused Beaufre’s contention that successful multilateral deterrence required a closely linked alliance, and he never liked to admit the dependence of French deterrence on the Untied States. But if the Soviets believed the French nuclear force might act as a trigger, then de Gaulle was happy to accept whatever strategic leverage this might imply for France.⁸¹

Above all, de Gaulle’s desire was to preserve France and avoid a catastrophe similar to World War II. Regardless of desire, de Gaulle knew that American force added to the security of France, but as the Cold War progressed and the United States repeatedly fought wars in Asia or otherwise pursued its national interest at what might have seemed

⁸⁰ Kohl, “French Nuclear Diplomacy,” 155.

⁸¹ Gordon, “Idea of France,” 62.

to the expense of the central commitment to the defense of continental Europe, this security became a liability that might drag France into a conflict which it did not want.⁸²

c. Defense for Every Point of the Compass

Another element of strategy established by de Gaulle which became apparent in the mid 1960's and which was unique to France was the famous doctrine of “*defense tous azimuts*” (overall defense/defense of all azimuths). The rationale behind the theory rested on the faith in nuclear weapons and the belief that the uncertainty of the international environment would require France to be able to deter aggressors around the globe with “megaton ballistic missiles of a world-wide range.”⁸³ This element was never fully implemented due to the lack of long-range nuclear capability but it did become a part of official French doctrine, albeit briefly, and was consistent with de Gaulle’s goal of independence. This strategy was articulated by General Charles Ailleret in an article published in the *Revue de Défense Nationale* in which he argued that it was “no longer possible to plan for war against ‘a single, well-defined, possible enemy’ because the future was so uncertain.”⁸⁴ The rationale for this strategy stemmed from the events of the mid-1960s and was influenced by de Gaulle’s own doubts about the stability provided by the competing superpowers and how long it would last. As Freedman points out, “the Soviet threat had diminished while the Americans were becoming more threatening, by getting themselves into dangerous adventures in Vietnam.”⁸⁵ Not wanting to be dragged into a conflict in which France did not condone and fearing escalation of American adventures, de Gaulle wanted France to further separate itself from the prevailing trends. De Gaulle voiced these concerns in 1959 when he noted, “Probably the sort of equilibrium that is establishing itself between the atomic powers of two camps is, for the moment, a factor in world peace, but who can say what will happen tomorrow.”⁸⁶ An effort to prepare for the potential threat from different enemies and further establish a

⁸² This syndrome has operated in the post-1989 world as well, with the most recent evidence being the 2003 invasion of Iraq led by the United States and supported by a “coalition of the willing.”

⁸³ Freedman, “Evolution of Strategy,” 307.

⁸⁴ Quoted in Freedman, “Evolution of Strategy,” 306.

⁸⁵ Ibid.

⁸⁶ Quoted in Ibid.

capability and strategy independent from NATO led to the development of the strategy of *defense tous azimuts*, which, in theory, would allow France to further distance herself from the alliance and maintain autonomy in her foreign policy. This concept also allowed for a rapprochement and détente with Eastern Europe and gave legitimacy to de Gaulle's call for further development and expansion of the *force de frappe*, including thermonuclear tipped ICBM's.

C. THE LEGACY OF DE GAULLE: FRENCH STRATEGY THROUGHOUT THE COLD WAR

More than any other individual, de Gaulle shaped the foundations of French nuclear armament based on national independence and autonomy. He strove to reestablish France's *grandeur* within the international system and created a "Gaullist doctrine" that would influence and guide the French Republic for the remainder of the Cold War. He had advanced the idea of an autonomous French nuclear arsenal and sought to move from an "Atlantic" to a "European" security role. During this time he had criticized NATO and the United States, ultimately leading to France's withdrawal from NATO military integration. He was able to negotiate French independence with relative strength bolstered by the progress of the French nuclear program, the American quagmire in Vietnam, a strong French economy, and the emerging détente in Europe. However, events in the last twelve months of his Presidency decreased de Gaulle's assertion for French independence. During this time the labor strikes of May 1968 and subsequent wage concessions shook French society and de Gaulle's power.⁸⁷ Additionally, the Soviet invasion of Czechoslovakia in the summer of 1968 had convinced de Gaulle that the Cold War had not ended and it presented a serious risk to Europe. These events led to a shift in French diplomacy that signaled a rapprochement toward NATO and a move away from the radical positions of the early 1960s. This shift

⁸⁷ In May 1968 a series of student strikes broke out throughout France. The de Gaulle administration's attempts to quash those strikes by further police action only inflamed the situation further, leading to street battles with the police, followed by a general strike by ten million French workers, roughly two-thirds of the French workforce. The government was close to collapse but the revolutionary situation evaporated almost as quickly as it arose. Workers went back to their jobs, urged on by leftist union parties. A comprehensive analysis and history of the May Strikes and its impact on French society and politics has been published by Daniel Singer, see; Daniel Singer, *Prelude to Revolution: France in May 1968* (New York: Hill and Wang, 1970).

in strategy would influence France's doctrine for the remainder of the Cold War but allow France to remain relatively independent.⁸⁸

1. Rapprochement with NATO: The Fourquet Doctrine

Just one month before de Gaulle's resignation, in March 1969, General Michel Fourquet, chief of staff of the armed forces, gave a speech at the *Institut des Hautes Etudes de Défense Nationale*. In this speech the general established the foundation for the future of French nuclear forces indicating the acceptance of a policy of a graduated or flexible response similar to that of NATO, rather than the earlier all-out, massive retaliation.⁸⁹ This new policy, which was the result of a major policy review in the autumn of 1969, led to the development of what was termed the Fourquet Doctrine. According to Philip Gordon, "the speech is noteworthy not only because Fourquet was making the final major defense policy statement approved by de Gaulle but because it was the first attempt to express French strategy as the major elements of the nuclear force came onto line. It was also important because it was the first of several highly consistent policy formulations that would emerge during the Pompidou administration, formulations that set a standard for subsequent continuity and change."⁹⁰ Compared to General Ailleret's previous statements, this shift in doctrine marked a departure from the extremes of French isolation supported by de Gaulle earlier in his administration.

The Fourquet Doctrine refocused French strategic doctrine from a world wide perspective, back to the Soviet threat and supported a more flexible and adaptable nuclear strategy, commensurate with but not exactly like NATO's thinking on deterrence. Menon highlights the major elements of this shift when he surmises, "Fourquet questioned the concept of a deterrent strategy based wholly on massive retaliation against an unidentified foe, and stressed both the likelihood of an enemy coming from the east, and the need for a strategy allowing both for gradual escalation and the possibility of participation in forward defense."⁹¹ This assessment seems to formalize the conclusions that de Gaulle had himself reached at the end of his career, primarily that "pure

⁸⁸ Gordon, "Idea of France," 64-65.

⁸⁹ Kohl, "French Nuclear Diplomacy," 162-263.

⁹⁰ Gordon, "Idea of France," 65.

⁹¹ Menon, "Limits of Independence," 22.

“deterrence” based on nuclear power alone was not flexible enough to tackle the threat posed by the Soviet Union. The “all or nothing” posture of massive retaliation supported by the rhetoric of the early 1960’s left little room for maneuver and became less credible and realistic over time. This new doctrine opened the door for coordination between French and NATO conventional forces and its implementation was dependent on the use of tactical nuclear weapons which were supposed to be ready by 1972. However, this shift in policy did not imply that France would rejoin the integrated military structure only that it saw the value in coordinating a strategy that would allow gradual escalation aimed at the primary goal of defending French national interests with its nuclear arsenal. Seen as the last strategic vision by de Gaulle, the Fourquet doctrine in no way meant that France had put away its stress on independence and autonomy and as Menon points out, “French policy after the resignation of de Gaulle continued to display ambivalence concerning solidarity with allies, ambivalence incorporated into a doctrine fossilized through official publication in the White Paper of 1972.”⁹²

2. Pompidou: Continuation of Gaullist Strategy

Even after de Gaulle’s resignation in April 1969, the force of his doctrines and the *force de frappe* continued to strongly influence French identity and policy. During his immediate successor’s administration, Georges Pompidou continued to maintain the legacy of de Gaulle from 1969 to 1974. As Gordon points out:

The emphasis on continuity in defense policy was clear not only in the rhetoric and symbols of independence and greatness but in terms of military programs and procurement, budgets, and the composition of forces....The emphasis on continuity and the irreversibility of Gaullist priorities was written clearly into the military program law of 1970 (for 1971-1975), which began with the classic statement that ‘the major objective of [our] national defense is maintaining the independence of our country in liberty and peace.⁹³

For all practical purposes the vision of de Gaulle remained alive and well in the French Republic. The significance of this vision could be seen in the growing support for and development of French nuclear assets. During Pompidou’s term:

⁹² Menon, “Limits of Independence,” 23.

⁹³ Gordon, “Idea of France,” 69.

The French nuclear force had expanded and was greatly improved, notably with the deployment of tactical nuclear weapons, intermediate-range missiles on the *Plateau d' Albion* and strategic submarines as mentioned; superpower détente had become practically institutionalized, with strategic arms control stabilized to a point of dangerously resembling the ‘condominium’ feared by de Gaulle; and despite arms control, the Soviet Union had gone from a clearly inferior strategic position vis-à-vis the United States to numerical superiority in both ICBM’s and strategic submarine launchers.⁹⁴

These strategic changes created a broad array of questions concerning the utility and strategy of French nuclear forces and signified the beginning of an evolution in French strategic doctrine that would be solidified in a 1972 defense White Paper.

a. The 1972 White Paper on National Defense

The *Livre Blanc Sur La Défense Nationale* (National Defense White Paper) can be seen as the single most powerful affirmation of de Gaulle’s legacy of defense doctrine. It established what the French “national interests” were and clarified the role in which nuclear arms would be used to secure them. The doctrine established by the paper advocated all of the principle Gaullist thoughts into a cohesive assessment of French defense. As Gordon points out, “the White Paper, unprecedented in the Fifth Republic, was a comprehensive statement of the objectives, means, missions, and organization of French forces and, although it did not appear until two years after the General’s death, stands as probably the best single official expression of Gaullist principles of national defense.”⁹⁵ It upheld three primary concepts espoused by de Gaulle in which, “proportional deterrence was the primary means by which France ensured its own defense and avoided war; the American guarantee was not automatic and the ‘nuclear risk’ could not be shared.”⁹⁶ Additionally, the authors of the White Paper supported the flexibility proposed in the Fourquet doctrine and rejected the idea of a

⁹⁴ Gordon, “Idea of France,” 69-70; De Gaulle’s “condominium” argument was that Europe would become a battlefield for American-Soviet expeditionary forces and a target for the exchange of nuclear weapons. In de Gaulle’s mind, the French nuclear “trigger” would allow for this exchange in which the super-powers would forgo attacks on each others soil due to massive retaliation and instead, propagate a nuclear confrontation on European soil.

⁹⁵ Gordon, “Idea of France,” 70.

⁹⁶ Ibid., 72.

global nuclear defense or an “all-or-nothing” deterrence, theorized by Gallois stating that it was inconceivable

To think of retaliating to all hostile action, regardless of where it comes from by nuclear threat. Therefore, it is necessary to be able to oppose limited hostile actions either by counteracting directly or by reverting to appropriate retaliation. The notion of deterrence is not absent from this point of view, but when the atomic weapon, because of its very excess, cannot constitute a credible deterrent, conventional and easily deployed means should be available. Crossing the threshold of the atomic threat can only be justified in a really critical situation.⁹⁷

The relevance of the White Paper’s assertions lies in the institutionalization of de Gaulle’s strategic thinking and the legacy which would be maintained throughout the remainder of the Cold War. This legacy would continue to provide the guiding principles which France would rely on to support and modernize its atomic forces through the next four administrations. And as the nuances of strategy would be manipulated by those administrations, the theoretical foundations of Gaullist thought would continue to prevail.

b. Increasing Flexibility: Tactical Nuclear Weapons

The more flexible path for deterrence laid out by the 1972 White Paper contributed to the acquisition of additional means to indicate French resolve. Though the most broadly held conceptions of French nuclear forces were considered strategic, in the mid-1970’s a “tactical” element of French nuclear forces emerged, “as a means of demonstrating a seriousness of purpose, perhaps to useful military effect, but without triggering the holocaust.”⁹⁸ The intent of this concept would be to signify to an adversary (primarily the Soviet Union) the resolve and determination to protect France’s vital interests which would hopefully lead to a political solution rather than an escalation of conventional aggression into nuclear exchanges. This new gradual response option was consistent with the objectives and capabilities of the French nuclear deterrent force which were poised against a significant major power that had the ability to conquer France with its conventional power alone. As one analyst pointed out, “The Cold War doctrine talked of deterrence ‘*du faible au fort*’, from the weak to the strong. This consisted essentially of being able to inflict enough damage on any potential aggressor--

⁹⁷ Gordon, “Idea of France,” 72.

⁹⁸ Freedman, “Evolution of Strategy,” 308.

for all practical purposes the Soviet Union--to mean that an attack on France would not be worthwhile.”⁹⁹ Although these weapons indicated a shift from strategic to tactical uses, it did not represent a fundamental change in strategy; rather, it emphasized the deterrence of war and the long-held French doctrine of “non-war.” These basic tenets of non-war, highlighted in the White Paper, were expressed by de Gaulle himself through three basic principles: “(1) American nuclear protection was no longer perfectly effective in the ballistic missile age; and (2) a war fought in Europe along the lines of NATO’s plans for flexible response, even if ‘won,’ would be an unambiguous disaster for Europe. (3) The obvious strategic goal of France, under these conditions, was to prevent a war from occurring, not by posturing to win it but by making it too risky for the potential aggressor to start.”¹⁰⁰ Since de Gaulle’s era, the French have maintained a policy of *non-emploi* (non-use), the central theme being that nuclear arms provided the political means by which to avoid war altogether rather than the military means to enact war. As Robbin Laird points out, “the French present their doctrine as a strategy of ‘non-war,’ as opposed to NATO strategy, which ‘explicitly envisages the possibility of a conflict.’ French doctrine only envisages that possibility to the extent necessary to test the enemy’s intentions prior to first nuclear strike. Deterrence consequently equated with the impossibility of war.”¹⁰¹ Therefore, the introduction of tactical nuclear weapons and the doctrine of *non-emploi* can be seen as extensions of Gaullist thought and strategy that were clarified by the strategic review in the 1972 White Paper and upheld in the Presidency of Georges Pompidou. Tactical nuclear weapons continued to be designated as strategic weapons aimed at *dissuasion* of a Soviet attack. As Laird indicates, “according to the French, their tactical nuclear weapons are not to be considered as battle field weapons, whereas U.S. weapons are positioned to fight a limited nuclear war that

⁹⁹ Martin Butcher, Otfried Nassauer and Stephen Young, “Nuclear Futures: Western European Options for Nuclear Risk Reduction,” *British American Security Information Council and the Berlin Information-center for Transatlantic Security (BITS)*, (December 1998, BASIC/BITS Research Report 98.6). <http://www.basicint.org/pubs/Research/1998nuclearfutures1.htm> (accessed September 09, 2006); Chapter 3, 1.

¹⁰⁰ Gordon, “Idea of France,” 75.

¹⁰¹ Robbin F. Laird. *French Security Policy: From Independence to Interdependence* (Boulder, CO: Westview Press, inc., 1986). 11.

might well engulf France.”¹⁰² The strategy embodies by the White Paper and the development of tactical nuclear weapons created an “ambiguous” doctrine of deterrence that left open the exact role and function of the French nuclear force, particularly in relation to the defense of Europe. The strategic vision upheld in the Pompidou era and supported by the White Paper would have a lasting effect on subsequent administrations and would continue to be the guiding light for nuclear strategy until the end of the Cold War.

3. Continuities with Change: Giscard d’Estaing and Mitterrand

With the foundations of French nuclear diplomacy and strategy established by de Gaulle and later the 1972 White Paper under Pompidou, the mid 1970’s saw the advent of an effort to shift away from Gaullist thinking and expand not only the nuclear strategy but also diplomatic efforts within the alliance. During the 1960’s, under de Gaulle, nuclear ambitions drove strategy and diplomacy within the French Republic. “Under Giscard d’Estaing, an attempt was made fundamentally to alter the content of French deterrent strategy.”¹⁰³ This shift sought to broaden French nuclear strategy through the expansion of tactical nuclear weapons and an enlarged “anti-cities” strategy bordering on counter-force targeting and by increasing support for conventional forces necessary to ensure European security. The pillars of Giscard’s vision lay in the premises of European, Atlantic, and non-nuclear variables contrary to Gaullist thought. As Gordon points out:

The European premise was that France, no matter how secure in might be able to protect its national territory with the force de frappe, could never count on remaining free if the rest of Western Europe did not also remain free...The Atlantic premise was that in order to prevent such a somber situation, the Atlantic Alliance, not a putative European Alliance, had to remain the primary forum for French defense, and... the non-nuclear premise was that a defense posture excessively reliant on nuclear deterrence was not credible, and thus only a more flexible strategy including increased conventional options could contribute adequately to French security.¹⁰⁴

¹⁰² Laird, “French Security Policy,” 86.

¹⁰³ Menon, “Limits of Independence,” 23.

¹⁰⁴ Gordon, “Idea of France,” 83-84.

Moving forward under these precepts Giscard initiated revisions in the nuclear strategy with the intent of improving Frances responsive capabilities. It is important to note that although conventional forces will not be discussed in this account, the shift in emphasis from nuclear to conventional capabilities indicates a fundamental change of course compared to previous administration.¹⁰⁵ The reduced emphasis on conventional capabilities and their role in the alliance became a focal point for newly elected President Valery Giscard d'Estaing. Although initially successful, Giscard's policies would eventually be restrained and returned to Gaullist principles by the end of his tenure and subsequently under the Mitterrand administration.

a. Giscard's Adaptation of Nuclear Strategy

The principles of Gaullist thought and the strategic vision established by the 1972 White Paper came under fire in the seven-year presidency of Giscard d'Estaing (1974-1981). Giscard sought to clarify the ambiguity of the 1972 White Paper and improve alliance discourse by restoring elements of alliance solidarity in French defense discourse. Giscard considered France a key player in the alliance and that France's nuclear weapons could serve the alliance indirectly while simultaneously serving French interests directly. Additionally, Giscard questioned the all-or-nothing counter value nuclear strategy of massive retaliation and supported a more flexible and broader array of nuclear capability that could bring together alliance interests, and suggested a battlefield role for tactical nuclear weapons.¹⁰⁶ Under his European premise, “the Giscard d'Estaing administration expanded the scope of potential interest served by French military power—including by implication the nuclear forces—by introducing a concept of an ‘enlarged sanctuary’.”¹⁰⁷ General Guy Mery, Chief of Staff of the Armed Forces, introduced the concept of *extended sanctuarization* (enlarged sanctuary), as the ability to

¹⁰⁵ According to Gordon, “the Gaullist years had been a period of diminishing military roles rather than expanding ones. To be sure, the creation of the *force de frappe* was a new and obviously very costly role, but France was able to compensate for it by cutting back significantly on its expansive land army after 1962. Under an American nuclear umbrella still considered viable and with a military doctrine that deemphasized conventional forces, the French could neglect their land army as well as their navy with little serious consequences and instead concentrate their military resources on the nuclear force.” Gordon, “Idea of France,” 101.

¹⁰⁶ Laird, “French Security Policy,” 86.

¹⁰⁷ Ibid., 85.

“allow us to intervene with the whole or part of our forces throughout the entire zone where the security of this country may be immediately threatened.”¹⁰⁸

This signaled an expansion of nuclear doctrine that might include areas outside of French borders when national territory had not yet been attacked but was potentially threatened. Under Giscard, “the tactical nuclear strike would neither be an abstract nuclear warning shot nor part of proportional deterrence but a militarily useful gesture that would force an aggressor to disperse its forces, to prepare them for a nuclear environment, and ultimately, to stop in the face of nuclear fire.”¹⁰⁹ However, by the end of the 1970’s this concept was rejected by French officials and as David Yost observed, “the French added the term *non-bataille* (non-battle) to their strategic lexicon, a corollary of the term *non-emploi* (non-use). As on the strategic nuclear level, France’s means were too limited to contemplate combat with tactical nuclear arms.”¹¹⁰ Tactical nuclear weapons morphed into the concept of “pre-strategic” weapons that would be used as an *arme d’ultime avertissement* (weapons of final warning). This basic foundation, established under the concept of the “warning shot” during the de Gaulle and Pompidou periods, remained unchanged for the remainder of the Cold War.

b. Enlarged “Anti-Cities” Strategy

Along these same lines, Giscard attempted to shift the targeting of French strategic nuclear forces toward an “enlarged anti-cities strategy.” This was an attempt to broaden the concept of the “anti-cities” strategy by targeting industrial, economic and military targets bordering on a counter-force strategy. David Yost states that Giscard had authorized the expansion of the “anti-cities” strategy when he reported in his memoirs that he had approved “as the objective for our strategic strike ‘the destruction of 40% of the economic capabilities of the Soviet Union on this side of the Urals, and the disorganization of the country’s leadership apparatus.’”¹¹¹ However, like the tactical nuclear strategy, this concept had little usefulness and was short-lived due to the lack of means and accuracy for a counter-force strategy. The expanded strategy also posed a

¹⁰⁸ Quoted in Freedman, “Evolution of Strategy,” 308.

¹⁰⁹ Gordon, “Idea of France,” 88.

¹¹⁰ Sokolski, “Getting Mad,” 206.

¹¹¹ Ibid., 204.

much greater problem explained General Mery: “even if we had sufficiently accurate weapons, we would destroy only a truly minor part of his entire order of battle, and we would then be assured of his immediate retaliation.”¹¹² Given France’s limited nuclear resources anything other than a massive retaliation against Soviet cities that would produce unacceptable damages would limit the effectiveness of deterrence.

By the end of Giscard’s tenure, despite a successful beginning, each of these initiates had been challenged. The prevailing political power of Gaullists, economic constraints, and military shortfalls decreased Giscard’s ability to make any permanent changes to the strategy of the *force de frappe* and ultimately led to the return of a nuclear deterrent strategy based on the perspectives of de Gaulle and the 1972 White Paper. And, as Gordon points out, “when looked at closely, however, Giscard did sustain the priority accorded to nuclear deterrence, and if no new nuclear programs were initiated, the modernization and improvement of old ones did go ahead...Despite some changes in particular military doctrine, French security policy during the Giscard years remained Gaullist. Giscard maintained the priority of autonomy of decision, and continued to pursue the objectives of French primacy and national grandeur.”¹¹³

4. Mitterrand’s Nuclear Strategy

After Giscard’s presidency, the incoming President François Mitterrand (1981-1995) would be the first Socialist government in the Fifth Republic. The Socialists, and in particular Mitterrand, had been the most ardent voice of opposition to Gaullist defense policies since the 1960s. Gaullist elites feared that this new Socialist government would make fundamental changes to defense policy, particularly the *force de frappe*, which would negate the fundamental principles of autonomy and independence established by de Gaulle. However, these fears never materialized, and under Mitterrand, Gaullist defense principles and nuclear strategy were upheld. As Philip Gordon noted, “President Francois Mitterrand had for decades been General de Gaulle’s most severe and most persistent critic, yet by 1981 he was implementing a security policy that was firmly in the Gaullist tradition.”¹¹⁴ The most prominent reasons for upholding Gaullist principles

¹¹² Sokolski, “Getting Mad,” 205.

¹¹³ Gordon, “Idea of France,” 103-104.

¹¹⁴ Ibid., 106.

were that by the mid-1970s the logic and basic principle of de Gaulle's strategic policies had become embedded in the French political and military ethos and domestically the sense of independence and doctrine established by de Gaulle had become a political "vote getter" which the Socialist need to remain in power.¹¹⁵ This assessment most certainly pertains to French nuclear strategy as well, in that changes initiated by Giscard would be overturned and clarified in such a fashion as to be clearly Gaullist in principle and practice.

The influence of Gaullist thought became most evident in the nuclear policy of Mitterrand, "because of the priority accorded to it, the force structure adopted for it, and the employment doctrine with which it was governed."¹¹⁶ The return to Gaullist principles can best be demonstrated with two issues Mitterrand supported in the nuclear doctrine. First, Mitterrand sought to reestablish the nuclear force in its national nature, as Gordon indicates in the following assessment:

The continued influence of Gaullist traditions was also apparent in the doctrines that governed the nuclear force. In contrast to Giscard's early experiments with an implicit extension of the French deterrent, the Mitterrand administration began much more cautiously. To be sure, the socialists continued to emphasize the principles of "uncertainty" and "vital interest" that had become part of the French strategic landscape since the early 1970's. They recognized as well as anyone that a gap existed between the concept of a national nuclear sanctuary and the expression of solidarity in Europe, and that the gap was growing as the American nuclear guarantee became less and less credible. But at the same time, the Mitterrand team insisted, publicly at least, that the "rules" governing France's nuclear force had not fundamentally changed.¹¹⁷

In essence, Mitterrand changed course from the previous administrations attempt to expand the role of the French nuclear arsenal toward Europe, by reasserting that France's nuclear assets would be strictly for national interests and that these weapons were could not be shared. These sentiments returned French strategy back to the principles established in the 1972 White Paper, which were the most supported official statement of Gaullist principles. Additionally, Mitterrand took issue with the deployment doctrine for tactical nuclear weapons that Giscard had attempted to expand.

¹¹⁵ Gordon, "Idea of France," 108.

¹¹⁶ Ibid., 114.

¹¹⁷ Ibid., 115.

The 1972 White Paper had supported de Gaulle's notion of tactical nuclear weapons should be considered strategic in nature and used as a "warning shot" to indicate French resolve. This strategic principle had been changed in the Giscard administration toward a battlefield use which could augment conventional forces and European allies. As Gordon points out, Mitterrand reoriented the use of tactical nuclear weapons back to Gaullist principles:

The influence of Gaullist doctrines on Socialist military policy—once again to a greater degree than under the previous administration—was also apparent in tactical nuclear doctrine. Whereas Giscard had announced that tactical nuclear weapons were 'battlefield weapons as well as weapons of deterrence,' Mitterrand made it explicit that they would not be used 'like some sort of battlefield super-artillery.' One year later, the administration defined its position on tactical nuclear arms even more clearly by changing their official name to *armes pré-stratégiques* (pre-strategic weapons) thus emphasizing their direct link to the strategic nuclear force. This 'new' concept was, in fact, a return to the 'old' one as written into the White Paper in 1972. France's short-range nuclear weapons would be given no battlefield role whatsoever, and their sole purpose was to signal to a potential adversary France's willingness to use its nuclear arms.¹¹⁸

Thus, a full return to the ideals and principles of de Gaulle was orchestrated by an administration that had initially been seen as the antithesis of Gaullist thought. Mitterrand, the most unlikely of subjects to do so, had effectively taken on the doctrines and principle of de Gaulle as his own, which further increased the legacy of Gaullist strategy in French defense policy. Aside from these two issues, Mitterrand did seek to improve relations with the alliance and West Germany along the lines of Giscard but not to the detriment of Gaullist thought. In the final analysis, "the adaptation of François Mitterrand to the habits, doctrines, theories, and force postures put in place by General de Gaulle was, thus, remarkable, and it could scarcely be argued that the early 1980's saw a fundamental break with traditional Gaullist practices and principles where national defense was concerned."¹¹⁹

D. CONCLUSION

The inception of the *force de frappe* during the Fourth Republic and later its official sanctioning and implementation under President de Gaulle in 1958 was a

¹¹⁸ Gordon, "Idea of France,"¹¹⁸ Ibid., 117.

¹¹⁹ Ibid., 118.

concerted effort to obtain the weaponry which would allow France to strengthen its defensive autonomy in the nuclear age. This desire for independence was driven by the search for *grandeur* in international politics which had become an influential driving force within French society and politics since the enlightenment. The most ardent proponent for the search for *grandeur*, General de Gaulle, sought to obtain nuclear weapons in order to counteract the influence and hegemony of the United States and improve France's political standing vis-à-vis the Atlantic Alliance which had been marginalized after World War II. For de Gaulle, an independent French nuclear arsenal represented the most powerful political tool obtainable to pursue this goal.

With the first successful nuclear test in 1960, General de Gaulle formulated a nuclear doctrine which accentuated his political goal of independence while providing France with a nuclear arsenal designed to ensure the “vital interests” of France were protected against Anglo-Saxon dominance and Soviet aggression. Based in some part on the theories of French strategists General Gallois and Beaufre, a nuclear deterrent strategy of “proportional deterrence” was established that would allow for the deterrence of the strong by the weak. As Alliance stability and the nuclear umbrella fell into question, the advent of the independent nuclear force paved the way for France's withdrawal from NATO's integrated military structure. Gaullism became the mainstay of political and strategic thinking within France that would dominate French nuclear doctrine for the remainder of the Cold War.

Gaullist strategy and diplomacy continued to guide the administrations of Pompidou, Giscard, and Mitterrand. During the Pompidou period, France developed its defense doctrine and adopted and codified the principles of Gaullism in the 1972 Defense White Paper that identified the primary goals, missions, and doctrine for the French nuclear forces. This event further codified Gaullist principles in French defense and laid the foundation for a nuclear strategy which would be questioned by the administration of President Giscard d'Estaing. Giscard sought to expand French nuclear doctrine and the role of tactical nuclear weapons by moving it closer to the European and Alliance mainstream. The widening of nuclear deterrence to an “enlarged sanctuary” and the battlefield use of tactical nuclear weapons reoriented the French nuclear doctrine away from strictly national focus and Gaullist principles. However successful at first, these

policies ultimately came into question, and by the early 1980s were adjusted back to their Gaullist foundations in the Mitterrand Presidency. During Mitterrand's term in office, the Socialist administration surprisingly upheld virtually every Gaullist principle of nuclear deterrence policy. Throughout these administrations de Gaulle's strategy influenced and guided French policy and provided the necessary justification for the expansion of French nuclear forces and strategy for the remainder of the Cold War.

Although Gaullist principles remained intact, the fall of the Berlin wall and the end of the Cold War in 1989-1991 ushered in the possibility for unprecedented democratization, peace and prosperity throughout Europe, creating euphoric optimism that "international institutions and norms could eventually prevent, contain, and resolve all manner of conflicts."¹²⁰ The experience of the Persian Gulf War stimulated the notion that the United Nations and European-Atlantic institutions such as NATO were no longer paralyzed as collective security organizations and the hopes were that Europe would finally escape its militaristic past. All across Europe the Cold War mentality switched to an almost "pacifist" predilection toward conflict. The use of force was downplayed and the outbreak of war seemed to most observers of strategy to be unthinkable. The prospect of peace coupled with economic development reduced the emphasis on military means for conflict resolution within Europe. This attitude certainly did not escape France and the sea-change in the international environment created new uncertainty for the French nuclear strategy and the French arsenal. However, this new "world order" brought about unexpected crises within and beyond Europe that would require a shift in strategic thinking and a complete reassessment of nuclear doctrine.

¹²⁰ Lawrence Freedman. "Why the West Failed." *Foreign Policy*, 97 (Winter, 1994-1995), 54.

THIS PAGE INTENTIONALLY LEFT BLANK

III. EVOLUTION OF FRENCH STRATEGY BEYOND THE COLD WAR

A. INTRODUCTION: THE SECOND COMING OF THE NUCLEAR AGE

In the post-Cold War era, the threat environment throughout the world has continued to evolve, due in part to new challenges brought forth by globalization, technology, the threat of attacks by terrorists or “rogue” states, possibly with Weapons of Mass Destruction (WMD). This new threat environment has led to an evolution in French national security strategy including the nuclear deterrent policy. France maintained a deterrent strategy based on Gaullist principles, but the changing international environment and “the end of the cold war saw France frozen in a deterrent position that had become obsolete.”¹²¹ Beginning with a Defense White Paper in 1994, Paris recognized the significant and dynamic strategic context and threats that began to emerge after the end of the Cold War, and in 1999 started a process of review and revision of its nuclear deterrent policy and forces. This evolutionary process yielded a transformation in French nuclear doctrine and strategic forces which was initially highlighted in a speech by President Jacques Chirac on June 8, 2001, to the Institute of Higher National Defense Studies. The speech indicated an initial shift in French nuclear strategy and future capabilities that continues to evolve through today. The events of September 11, 2001, the rise of extremist terrorism, “rogue” states with WMD capabilities and the threat of regional powers has provided ample stimulus for a revision in strategy that attempts to address these threats through new concepts in nuclear deterrence.

1. A New “World Order”: The Second Nuclear Age

That France has recognized a need to review and amend her deterrent strategy based on new threats such as terrorism, “rogue” states with WMD, and regional conflict is not sufficient to account for the deeper motivation guiding this new approach. The broader issue pertains to the future of nuclear weapons and deterrent thought in the international system. Although it is important for nuclear strategies to address current

¹²¹ Olivier Debouzy, “French Nuclear Deterrence Doctrine: An Aggiornamento,” *European Affairs*, 7:1&2 (Spring/Summer 2006), 1.

threats, it is also important for them to adapt to changing world orders. The end of the Cold War yielded a fundamental change in the landscape of international politics and security which prompted the widely held belief, or hope, that the collapse of the bi-polar world order would result in diminishing nuclear stockpiles and potentially the abolition of nuclear weapons all together. As Avery Goldstein points out:

As the Cold War ended, many hailed the advent of a “new world order.” Hopefully, it was asserted that the decades-long anxieties associated with superpower confrontation were ending. Many predicted that the post-Cold War world would be one in which old-style international politics was fundamentally transformed; economic issues would supplant military-security concerns on the agenda of statesmen. In this context, nuclear weapons almost overnight seemed to lose their central role in international politics, though concerns about the challenge of managing nuclear risks on the periphery (the intertwined nightmares about proliferation, terrorists, and “rogue” states) continued. Indeed, the spreading conviction that the heyday of nuclear deterrence was over even led some of the leading figures from the weapons programs and strategic policy circles of the Cold War superpowers to recommend that the existing nuclear states dismantle what these new abolitionists now saw as pointless and morally dubious arsenals.¹²²

These hopes have helped sustain and strengthen a proliferation regime that includes the 1969 Nuclear Nonproliferation Treaty (NPT), reduction in nuclear forces amongst many nuclear powers after the Cold War, and the 1996 Comprehensive Test Ban Treaty (CTBN). Although these efforts have been successful in many respects they have still not eliminated nuclear weapons in international politics nor completely stopped the proliferation of WMD. Unfortunately, the reality was that the world had become much more unstable since the collapse of the Soviet Union and proliferation of nuclear weapons has and will continue to spawn. Fred Charles Iklé thus talks about, “the second coming of the nuclear age.”¹²³ The most recent examples of this can be seen in the nuclear ambitions of Iraq, Iran and North Korea. Even with an international

¹²² Avery Goldstein, “Why Nukes Still Trump: Deterrence and Security in the 21st Century,” *Foreign Policy Research Institute* (November 13, 2000), 1. <http://www.fpri.org/enotes/military.200001113.goldstein.nukesstilltrump.html> (accessed on August 22, 2006).

¹²³ Fred Charles Iklé, “The Second Coming of the Nuclear Age.” *Foreign Affairs*, 75:1 (Jan/Feb 1996), 119-128. In his article Iklé makes the case that the nuclear age has not ended and a second act will follow. He believes that this is a result of the legacy and thinking of the Cold War and one that the West is ill-prepared to deal with.

nonproliferation movement to reduce nuclear weapons and downplay the importance of nuclear arsenals, nations are still seeking to obtain nuclear assets.

2. Economics and Security in the Second Act of the Nuclear Age

Although there are many causes for this “second nuclear age,” the economic and security reasoning stands out. Both in economic and security terms, nuclear weapons provide states with limited resources and funding an attractive alternative to more costly conventional forms of protection and security as well as an opportunity to join in the political ranks of other nuclear nations. Goldstein states, “for less prosperous countries facing daunting military threats and who are able to cross the nuclear threshold, the economic argument is even more compelling, since some will simply be unable to fund conventional forces in the quantity or quality that satisfies their security needs.”¹²⁴ Although expensive to develop and politically costly to acquire, nuclear weapons have a potential long-term beneficial payoff that far exceeds other alternatives. Secondly, according to Goldstein:

The shift from a bipolar to a unipolar and perhaps one day a multipolar world is unlikely to diminish, and may well increase, the appeal of the nuclear deterrent alternative. Under unipolarity, states unable to match the world’s sole surviving superpower and who believe it may threaten their interests, will see a nuclear deterrent as the most affordable and plausible counter within reach...Among several great powers, states may need to hedge against possibly shifting threat perceptions. Unlike conventional forces whose effectiveness is tailored to the nature of a particular adversary’s capabilities, the punitive effect of nuclear weapons is highly fungible and the payoff from investing in them is less volatile.”¹²⁵

Therefore, it is more than likely, regardless of nonproliferation regimes and counterproliferation efforts that nuclear weapons will continue to bridge the economic/security gap that exists in conventional programs making them a highly attractive option in the future.

This assessment has broad implications for current nuclear powers and those that may try to acquire nuclear or WMD capabilities. Certainly, the most troubling aspect of this situation is complicated by those “rogue states” or terrorist organizations which may attempt to capitalize on the proliferation of nuclear weapons for political gain, military

¹²⁴ Goldstein, “Nukes Still Trump,” 5.

¹²⁵ Ibid.

action, or ideological manifestations. As for France, this threat has required a shift in nuclear strategy in an attempt to maintain the effectiveness of deterrence

B. THE PROCESS OF CHANGE IN FRENCH STRATEGY SINCE THE COLD WAR

Beginning with the Defense White Paper in 1994, which stated that, "...the cold war is over, but the nuclear era goes on," Paris recognized the significant strategic context and dynamic threats that began to emerge after the end of the Cold War, and in 1999 started a process of reviewing and revising its nuclear deterrent policy and forces.¹²⁶ This process yielded a shift in French nuclear doctrine and strategic forces which was initially highlighted in the mentioned speech by President Jacques Chirac on June 8, 2001.

1. Elements of Change: Chirac's 2001 Speech on Nuclear Deterrence

a. Nuclear Deterrence: Reaffirmation of Independence

In order fully understand the significant issues promoted by President Chirac in his 2006 speech, it is necessary to incorporate some elements of the strategy that were highlighted in 2001. In his June 8, 2001 speech, President Chirac outlined many of the basic elements of French strategy which were born in the Cold War and evolved during the revision process in the mid 1990s. Many of the primary elements in French nuclear strategy remained unchanged throughout the review process initiated in 1999 and continue to be the foundation for French policy. First and foremost, Chirac reaffirmed the importance of the nuclear program and its value to the French republic when he stated, "Nuclear deterrence is the key element among the capabilities which enable France to affirm the principle of strategic autonomy which is fundamental to our defense policy."¹²⁷ Compared to many western powers that base much of their national security strategy on conventional might, France views its nuclear capability as the backbone of her political and military strength. Secondly, Chirac maintained the most important objective of France's nuclear forces as deterring major power threats by his asserting that "France's survival will never be threatened by a major military power with

¹²⁶ Debouzy, "Deterrence Doctrine," 1.

¹²⁷ Jacques Chirac (speech, The Institute of Higher National Defence Studies, Paris, France, June 8, 2001). http://www.cedoc.defense.gouv.fr/IMG/pdf/Discours_President_2001_en.pdf (accessed May 23, 2006).

hostile intentions and prepared to use all possible capabilities to carry them out.”¹²⁸ Furthermore, he defined two additional goals fundamental to the deterrent strategy; to preserve France from exposure to blackmail by smaller powers armed with weapons of mass destruction; and to contribute to the security of Europe and the Atlantic alliance. He also reiterated the deterrent rationale of France’s nuclear posture when he stated, “our nuclear forces are not directed against any country and we have always rejected the idea of regarding nuclear weapons as combat weapons to be used as part of a military strategy.”¹²⁹ Continuing France’s rejection of tactical nuclear weapons for battlefield use and reinforcing the idea that if nuclear weapons were to be employed by France, it would indicate a fundamental change in the nature of the conflict. Each of these aspects of the strategy had been a continuation of policy from both the Cold War experience and the events of the early 90’s which facilitated the revision process.

b. Flexible Deterrence against “Rogue States”

One of the innovations announced by Chirac in 2001 centered on the emergence of regional powers or “rogue states” that may threaten France’s vital interests with nuclear, chemical or biological weapons. Chirac stated: “Deterrence must also enable us to face up to the threats that regional powers possessing weapons of mass destruction might pose to our vital interests.”¹³⁰ Due to the end of the Cold War and the further proliferation of WMD, France has had a particular concern with deterring regional powers that may threaten the homeland. Chirac indicated a major shift in strategy when he said France’s nuclear arsenal would target “in priority it’s political, economic, and military centers of power.”¹³¹ This statement signals an adjustment which moves French strategy closer to NATO’s flexible response.” Flexible response was adopted by NATO’s Nuclear Planning Group (NPG) in 1976 and was originally, as described earlier,

¹²⁸ Chirac (speech, The Institute of Higher National Defence Studies, Paris, France, June 8, 2001).

¹²⁹ Ibid.

¹³⁰ Ibid.

¹³¹ Bruno Tertrais, “Nuclear policy: France Stands Alone,” *Bulletin of the Atomic Scientists*, 60:04, (2004), 48-55. http://www.thebulletin.org/article.php?art_ofn=ja04tertrais (accessed June 3, 2006): 2.

rejected by France.¹³² This shows a shift in thinking propagated by the nuclear revisions of the 1990s away from the all or nothing “anti-cities” deterrent strategy that was prominent during the Cold War toward a middle ground. Unlike the “flexible response” option supported by NATO which incorporated flexibility in the event of nuclear confrontation; the French view this capability as a means for signaling an *ultime avertissement* (final warning). Chirac signaled this concept in his 2001 speech when he said, “...the capability to signal, when the time comes, to a potential adversary, both that our vital interests are at stake and that we are determined to safeguard them.”¹³³ Bruno Tertrais, in the Bulletin of Atomic Scientist, points out that not only has France discarded the “anti-cities” strategy, but also “It is no longer possible to refer to France’s posture as a ‘deterrent of the strong by the weak’—now deterrence is judged valid when dealing with regional powers.”¹³⁴

The shift in strategy toward a more flexible response also implies that France will continue to move forward in the modernization of its nuclear forces. Chirac stated:

Against this background, and in agreement with the Prime Minister, I have defined a program for our nuclear forces which guarantees that France will possess a sufficiently diversified capability to ensure the credibility of our deterrent under any circumstances, wherever the threat originates and whatever its nature. Our nuclear capability relies on two types of nuclear weapons with different and complementary technical characteristics: submarine-borne ballistic missiles equipping the ocean component, and air-breathing missiles for the airborne component. The renewal and modernization of these forces, as well as the advancement of the simulation program, intended to compensate for the abandonment of nuclear tests designed to maintain our capabilities, constitute the next Military Program Act's key objectives in this area. The volume and characteristics of these assets have been determined according to a criterion of strict sufficiency in the light of the political and strategic context. In applying this principle, France has always sought to define the lowest possible capability level compatible with her security. Restricted

¹³² For a comprehensive collection of material on NATO cold war strategies, see; Gregory W. Pedlow, “NATO Strategy Documents 1949-1969” *The North Atlantic Treaty Organization Archives* (May 1999.) <http://www.nato.int/docu/stratdoc/eng/intro.pdf> (accessed December 28, 2006).

¹³³ Chirac (speech, The Institute of Higher National Defence Studies, Paris, France, June 8, 2001).

¹³⁴ Tertrais, “France Stands Alone,” 3.

to strict sufficiency, our nuclear deterrent is, again, more than ever at the heart of our country's security.¹³⁵

Although France's current nuclear capabilities will not be specifically addressed here, it is important to note that major changes in strategy and doctrine of this nature cannot be accomplished without new technologies and the capabilities to support them. Having said this, the shift in strategy accompanied by the modernization of French strategic nuclear forces signifies not only Paris' autonomous mindset but also the willingness to support evolutionary change. The importance of this cannot be understated in any advancement of policy or strategy in the nuclear arena.

c. The European Element

Lastly, the 2001 speech gave a clear indication of France's support for the security of Europe and its allies through its nuclear deterrent policy. Chirac pointed out this commitment when he said,

Our nuclear deterrent must also--this is France's wish--contribute to European security, and thus to the global system of deterrence maintained, together, by the democracies united by the treaty on collective security which Europe, the United States and Canada concluded over fifty years ago. In any event, it is for the President of the Republic to assess, in a given situation, the damage that would be inflicted on our vital interests. This assessment would of course take account of the growing solidarity among the countries of the European Union.¹³⁶

He remained vague as to how far France would go in terms of European solidarity but he did emphasize the point that France's relationship with her EU partners may be considered a vital interest. France's vital interest to this point had been defined by the 1994 Defense White Paper as "...the integrity of the national territory, including the mainland as well as the overseas departments and territories, the free exercise of our sovereignty, and the protection of the population."¹³⁷

¹³⁵ Chirac (speech, The Institute of Higher National Defence Studies, Paris, France, June 8, 2001).

¹³⁶ Ibid.

¹³⁷ Tertrais, "France Stands Alone," 1.

2. Chirac's 2006 Speech on Nuclear Deterrence

The June 8th, 2001 speech was somewhat of an unusual occurrence in French politics, as nuclear policy in France “is shrouded in secrecy—even more so than other Western nuclear weapons states—and transparency has long been anathema in Paris. Few public pronouncements or official documents are available for analysts and media to comment on.”¹³⁸ The speech further accentuates the developments of French nuclear strategy and its commitment to an evolving doctrine and capabilities meant to address the changing threats of the new century. Obviously, the speech was prior to the attacks of September 11th, and as the repercussions of those events unfolded, a different and more pronounced threat of terrorism began to plague the international community. In response to this and several other factors, to be discussed later, Chirac once again took to the podium to highlight his evaluation of thinking on French nuclear strategy. Many elements of the 2001 strategy have been updated and revisited, as highlighted by President Chirac on January 19th 2006.

a. Deterrence of State-Sponsored Terrorism

Unlike his previous speech, the 2006 speech focused solely on nuclear deterrent strategy and capabilities and can be seen as an extension of the policies established in 2001 with the exception of a few critical areas that may have major implications for the future. The most significant element of this new strategy was highlighted when Chirac stated:

The Leaders of states, who would use terrorist means against us, as well as those who would envision using... Weapons of Mass Destruction, must understand that they would lay themselves open to a firm and fitting response on our part. This response could be a conventional one. It could also be of a different kind.¹³⁹

This statement clearly indicates that a nuclear retaliation is now one of the options that the French are willing to utilize against state-sponsored terrorism. This is the first time anyone has addressed the response to terrorism in nuclear terms through a public forum. This strategy pertains only to state-sponsored terrorism, implies also non-state actors.

¹³⁸ Tertrais, “France Stands Alone,” 1.

¹³⁹ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L’Ile Longue, France, January 19, 2006).

France has never considered her nuclear deterrent useful against terrorist groups, only states. The justification behind this policy was spelled out by Minister of Defense Michele Alliot-Marie in testimony concerning Chirac's speech when she stated:

Faced with regional powers wishing to acquire nuclear weapons, it [France] must take into account the danger of terrorist groups being used by their governments. Facing also states armed with weapons of mass destruction whose governments could have failed, transforming hem into lawless zones, it must consider the implications that would follow the seizure of power by terrorist networks.¹⁴⁰

Although Paris continues to maintain that major power threats are its primary deterrence concern, it is clear that she has opened the door for deterrence to be used in a completely new fashion and has presented a ground-breaking warning to those states that may have links to terrorist organizations.

b. Striking at the “Capacity to Act”

The second new element of the 2006 Chirac speech pertains to France's ability to precisely and controllably strike at adversaries' “power centers, its capacity to act.”¹⁴¹ According to David Yost, the French concept of “capacity to act” is distinct from its “power centers” in that the French could detonate a nuclear weapon at high altitude creating an electromagnetic pulse (EMP) that “could jam, cripple or destroy all of the enemy's non-EMP-hardened computers and communications systems.”¹⁴² Such a controllable strike could render a potential enemy incapable of future actions but would not produce the fatal blast or effects of a direct nuclear attack thereby limiting collateral damage. This more discriminate and controllable option can be seen as the result of the modernization program that Chirac alluded to in his 2001 speech giving France multiple options in terms of strike potential that could reach specific political objectives.

c. The “Warning Shot” Revisited

The third element is a more implicit description of how exactly these new and improved weapons capabilities could be used within the nuclear strategy. As was alluded to in Chirac's 2001 speech, the “final warning” (*ultime avertissement*) has now

¹⁴⁰ Quoted in Yost, “New Nuclear Doctrine,” 703.

¹⁴¹ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L'Ile Longue, France, January 19, 2006).

¹⁴² Yost, “New Nuclear Doctrine,” 704.

become a fully advertised part of the French nuclear strategy. While only hints were given during the 2001 speech, the “final warning” has been reinstated as an acknowledge element of French nuclear deterrence in 2006. The “final warning” had virtually disappeared from nuclear tactics after the Cold War, but now has resurfaced with a different meaning and within a different context. In the Cold War the “final warning” was intended to be a deterrent against possible Soviet aggression. It was intended to convince the Soviet Union to stop any further westward movement by conducting a strike that would cause enough damage that the Soviet Union would discontinue or halt any attack due to a looming “anti-cities” attack. According to David Yost, “France’s delivery systems would be more flexible, accurate, and controllable: the warhead yields might be smaller, and the targets would be selected with the intention of demonstrating France’s ability to destroy the adversary’s ‘power centers, his capacity to act.’”¹⁴³ This would avoid high collateral damage targets which might be unacceptable to strike.

d. Broadening “Vital Interests”

A final new element emerged when President Chirac reiterated the core interests protected by nuclear deterrence and included “strategic supplies”, a new vital interest to be considered. Chirac stated:

The integrity of our territory, the protection of our population, the free exercise of our sovereignty will always be the core of our vital interests. But they are not limited to these. The perception of these interests is changing with the pace of the world, a world marked by the growing interdependence of European countries and also by the impact of globalization. For example, safeguarding our strategic supplies or the defense of allied countries are, among others, interests that must be protected. Assessing the scale and potential consequences of an unbearable act of aggression, threat or blackmail perpetrated against these interests would be the responsibility of the President of the Republic. This analysis could, if necessary, lead to consider that these situations fall within the scope of our vital interests.¹⁴⁴

Although vague on exactly what “strategic supplies” would mean, the Minister of Defense clarified at least one of the areas, namely “energy” resources.¹⁴⁵ France thus

¹⁴³ Yost, “New Nuclear Doctrine,” 705.

¹⁴⁴ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L’Ile Longue, France, January 19, 2006).

¹⁴⁵ Yost, “New Nuclear Doctrine,” 707.

recognizes the impact the global economy and the increased demand for resources could have on national security and has taken steps to include this in their doctrine.

e. Strengthening Nuclear Capability

In the 2001 speech, Chirac continued to emphasize the modernization of the nuclear forces that would support the revised strategy, particularly the more discriminate and controllable options. He highlighted the capability of French submarine-launched ballistic missiles (SLBMs) to carry a smaller number of warheads which would cause less destruction than a fully loaded one and with a high degree of accuracy. Additionally, he underscored the advancements in missile technology when he discussed the M51 ballistic missile and the Air-to-Ground Medium Range Missile system (ASMPA). The M51 has an intercontinental range and the ASMP-A can be dropped from bomber aircraft launched from aircraft carriers. These developments, which will be fully operational by 2010, are what Chirac referred to when he said: “We are in a position to inflict damage of any kind on a major power that would want to attack interests we would regard as vital. Against a regional power, our choice would not be between inaction or annihilation.”¹⁴⁶ The combination of new and modernized weapons affords France the ability of a graduated strike capability commensurate to the threat at hand.

f. European Nuclear Deterrence

There is another noteworthy addition to French strategy that may have wide-ranging implication for the European Continent and the EU. In his speech President Chirac broached the concept of a European nuclear deterrence when he stated:

Moreover, the development of the European Security and Defense Policy, the growing interweaving of the interests of European Union countries and the solidarity that now exists between them, make French nuclear deterrence, by its very existence, a core element in the security of the European continent. In 1995, France put forward the ambitious idea of concerted deterrence in order to launch a debate at European level on this issue. I still believe that, when the time comes, we shall have to ask ourselves the question of a common Defense that would take account of existing deterrent forces, with a view to a strong Europe responsible for its security. European Union member states have, moreover, begun to reflect together on what are, or will be, their common security interests. And I

¹⁴⁶ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L'Ile Longue, France, January 19, 2006).

would like us to deepen this reflection. This is a first and necessary step.¹⁴⁷

Although European concerns were voiced in his 2001 speech, the concept of a *dissuasion concertée* (combined deterrence) was not a political reality at the time. After the failure of the French initiative to develop a collective European nuclear deterrent in 1995, Paris believes it is time to reopen a dialogue with the notion of a unified and collective nuclear policy. Many consider this initiative as a ‘Europeanization’ of France’s nuclear deterrent posture and indispensable for an effective European Security and Defense Policy (ESDP). However, as David Yost points out, “most EU nations are not ready or willing to accept such a ‘nuclearization’ of the EU. Some EU nations oppose the very concept, and others prefer to rely on U.S. nuclear protection through NATO.”¹⁴⁸ Whatever the long-term outcome may be, it is interesting that France has decided to open this conversation as part of her nuclear deterrent strategy.

While some see Chirac’s comments as a move toward a collective European nuclear capability others see an overall trend toward “Americanization” of French policy in that the French have followed the U.S. lead in a revision of nuclear strategy in the wake of September 11, 2001, and the U.S. National Security Strategy of 2002. Thus, Bruno Tertrais stated, “many elements of the revised French policy are similar to those of its allies Britain and the United States. The French concept is particularly close to the British one. Both France and Britain reject counterforce doctrines and maintain a rather traditional outlook on deterrence.”¹⁴⁹ However, with the new strategy unveiled in Chirac’s 2006 speech, Tertrais points out the distinctive differences in the United States policy and French policy when he wrote:

Nuclear weapons hold a more central place in defense policy for France than for the United States. Contrary to what certain analysts think, George Bush’s America has in fact reduced the role of nuclear weapons in its military strategy, and no longer considers these weapons as the sole means of strategic deterrence at its disposition.¹⁵⁰

¹⁴⁷ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L’Ile Longue, France, January 19, 2006).Ibid.

¹⁴⁸ Yost, “New Nuclear Doctrine,” 719.

¹⁴⁹ Tertrais, “France Stands Alone,” 2.

¹⁵⁰ Yost, “New Nuclear Doctrine,” 717.

This convergence, more than likely, is the result of similar vision on how most effectively to address the threat posed by regional powers with WMD capability, rather than merely an epigone of U.S. doctrine. The primary departure point compared to the United States is the importance of nuclear deterrence toward national security. This was the sentiment of Chirac when he regarded nuclear deterrence as the “ultimate expression” of French prevention strategy.

3. Response and Concerns of New French Doctrine

a. Increasing Nuclear Importance

The reaction to Chirac’s speech has been mixed. Contrasting views of the implications of the revised strategy have brought forth two critical arguments which are central to the debates on the use of nuclear weapons and proliferation. David Yost points out one of these issues when he surmised, “critics in France and elsewhere in Europe have expressed concern that it might increase the likelihood of nuclear use in various ways, from extending the list of potential ‘vital interests’ in some circumstances to ‘strategic supplies’ to devising nuclear weapons with more discriminate and controllable effects.”¹⁵¹ The greatest concern is that the use of nuclear weapons will become common place as a result of the new strategy, having a negative affect on international order and actually increasing the risk of war. The counter argument was issued in an article in the *Financial Times* which stated, “the greater the prospect of France being able to limit the scope of a nuclear strike, the greater the chance of a French President daring to order one, and therefore the greater the potential deterrent effect of the *force de frappe*.”¹⁵² However, it is not clear that authorship of this doctrine and the capabilities necessary to employ it will make decisions in Paris any simpler. The potential ramifications for the use of nuclear weapons are staggering and require measured reflection from all concerned. The unintentional consequences could result in a true “clash of civilizations”, total war, or even worse, an increase in non-state terrorist attacks, that could not be

¹⁵¹ Yost, p. 23 Yost, “New Nuclear Doctrine,” 712.

¹⁵² John Thornhill, and Peter Spiegel. “Relevance of ‘force de frappe’ to terrorist age,” *Financial Times*, (20 January 2006), <http://search.ft.com/searchArticle?page=2&queryText=nuclear+deterrence&y=0&javascriptEnabled=true&id=060120000865&x=0> (accessed May 30, 2006).

easily be defended against, potentially creating a circumstance that could invariably bring France and Europe to its knees.

b. Proliferation Concerns

The second argument that has erupted from Chirac's speech and the new strategy concerns the implications to nuclear proliferation. Certain observers in Europe feel that the new strategy and capability "amounts to an affirmation of the utility of nuclear weapons and therefore contradicts efforts to downgrade their importance and promote nuclear nonproliferation and disarmament."¹⁵³ This argument becomes particularly important when viewed in relation to the nuclear talks with Iran since 2005. Commenting on the speech and the potential affect this may have on talks with Iran, François Heisbourg, a defense analyst with the Paris-based Foundation for Strategic Research said, "it's not the speech you give if you're trying to convince people not to acquire nuclear weapons."¹⁵⁴ Critics argue that this has now given Iran solid justification for acquiring nuclear weapons. In contrast, "some European observers speculate that drawing attention to military options might be helpful in the negotiations with Iran because...this is the first time that a European state...made clear that it is not disposed to let the United States alone have recourse, if necessary, to atomic weapons against states whose nuclear ambitions jeopardize international security."¹⁵⁵ Given the events of the last several months and the failure of the European talks with Iran concerning the elimination of its nuclear weapons program, consideration must be given to the incitement argument. It might indeed be that some nuclear strategies will not deter the proliferation of nuclear weapons and may actually advance the process.

c. Deterrence Credibility

A further argument has been raised which could perhaps be the most volatile element of the revised French nuclear policy. If the use of nuclear weapons is to counter-strike a state-sponsor linked to a terrorist attack, it is paramount that the intelligence driving the nuclear strike be accurate. David Yost echoes this sentiment

¹⁵³ Yost, "New Nuclear Doctrine," 715.

¹⁵⁴ Molly Moore, "Chirac: Nuclear Response to Terrorism is Possible," *Washington Post.com*, (January 20, 2004), <http://www.washingtonpost.com/wp-dyn/content/article/2006/01.html> (accessed May 20, 2006).

¹⁵⁵ Yost, "New Nuclear Doctrine," 715-716.

when he writes, “the credibility of the threat to retaliate against a state employing terrorist methods to attack France’s vital interests depends on an ability to identify with certainty the state behind an attack.”¹⁵⁶ It is of the utmost importance to determine whether the country or countries that train and support these terrorists be liable to identification by the intelligence agencies. Should a mistake be made in intelligence, no matter how minor, devastating consequences could follow and international condemnation could destroy credibility. Unfortunately this same mistake was made by the Bush Administration when it gathered information on Saddam Hussein’s WMD capability and links to the Al Qaeda terrorist group¹⁵⁷. Faulty intelligence collected by the CIA and other organizations, as well as incorrect analysis, led to the U.S. involvement in Iraq, which has cost both countries dearly. This very point will require France to invest in ever-increasing levels of intelligence capabilities which may provide only marginal levels of accuracy against an intelligence failure that would have monumental repercussions.

C. CONCLUSION

If one sets aside these arguments for the time being, one must look at the nuclear policy itself and analyze the foundational principles in order to gain a full comprehension of its intent. By doing this, one comes to the conclusion that France has adapted her nuclear deterrent strategy and force with ground-breaking new elements. The French strategy has evolved through the Cold War and into the twenty-first century through an evolutionary process that has yielded a comprehensive and coherent concept that tackles

¹⁵⁶ Yost, “New Nuclear Doctrine,” 714.

¹⁵⁷ For material on the failures of U.S. intelligence leading up to the war in Iraq (2003) and its impact on the conflict, see; Mark Phythian, “The Perfect Intelligence Failure? U.S. Pre-War Intelligence on Iraqi Weapons of Mass Destruction.” *Politics & Policy*, 34:2 (2006), 400-424; Paul R. Pillar. “Intelligence, Policy, and the War in Iraq.” *Foreign Affairs* (March/April 2006); Michael R. Gordon and Bernard E. Trainor. *Cobra II: The Inside Story of the Invasion and Occupation of Iraq* (New York: Pantheon Books, 2006).—Intelligence failures and political speculation resulting in questionable policy applications by decision makers are certainly not new to U.S. or its allies. Examples of these failures can be seen in the Cold War “bomber gap” and “missile gap” estimates, as well as strategic decisions in Vietnam. For further information on faulty intelligence and strategic decision making, see: James J. Wirtz, “Intelligence to Please? The Order of Battle Controversy during the Vietnam War,” *Political Science Quarterly* 106:2 (summer 1991), 239-263; Peter J Roman, *Eisenhower and the Missile Gap* (Ithaca, N.Y.: Cornell University Press, 1997); Lawrence Freedman, *US Intelligence and the Soviet Strategic Threat* (London: Macmillan, 1977); Douglas Porch, and James J. Wirtz. “Surprise and Intelligence Failure.” *Strategic Insights* 1:7 (Sep. 2002), <http://www.ccc.nps.navy.mil/si/sept02/homeland.asp> (accessed November 14, 2006).

the challenges of the international environment. President Chirac addressed this process and the resulting French policy when he stated:

In the face of crises that are shaking the world, in the face of new threats, France has always first chosen the path of prevention which remains in all its forms the very foundation of our defense policy. Relying on the rule of law, influence and solidarity, prevention is central to the set of actions conducted by our diplomacy which constantly strives to resolve crises that may arise here and there. Prevention also involves a whole range of defense and security postures, foremost among which are pre-positioned forces. Believing that prevention alone is enough to protect us would however be naively optimistic. To make ourselves heard, we must also be capable of using force when necessary. We must therefore have a substantial capability to intervene outside our borders, with conventional means, in order to support and supplement this strategy. Such a defense policy rests on the certainty that, whatever happens, our vital interests remain safeguarded. This is the role assigned to nuclear deterrence which directly stems from our prevention strategy and constitutes its ultimate expression.¹⁵⁸

In the final analysis, the new French nuclear strategy constitutes a prolongation of the revision process that started in 1999 which was further accentuated in the June 8, 2001 speech. The primary goals of this policy remain the same: to deter major power threats, to avoid exposure to blackmail by medium-size powers armed with weapons of mass destruction; and to contribute to the security of Europe and the Atlantic Alliance. Many see the revised strategy as a departure from accepted norms stretching the limits of nuclear deterrence far beyond its theoretical capability. However, research into the potential value of nuclear deterrence against “rogue states” and terrorist organizations yields a much more positive and constructive view for the relevance and continued support of *dissuasion*. A calculated policy that incorporates nuclear deterrence in a defensive posture that tries to meet new and ominous threats may have immense value. Given the unpredictable nature of the terrorism-WMD-rogue state triangle, nations must adjust and attempt to address these threats as they evolve, within the rule of law. France, given its limited conventional capabilities and its status as a regional power, has effectively set a new course for others to consider.

¹⁵⁸ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L'Ile Longue, France, January 19, 2006).

IV. THE VIABILITY OF THE FRENCH NUCLEAR DETERRENT

A. THE END OF NUCLEAR DETERRENCE?

Immediately following the Cold War the prevailing sentiment was that the heyday of nuclear deterrence was over. Efforts to reduce or eliminate nuclear stockpiles and negate the proliferation of nuclear weaponry became the central concern of the international community. Instead of devising nuclear deterrent strategies, the focus shifted to non-proliferation and the goal of disarmament, thus leading to the marginalization of nuclear capability. As the post-Cold War order continued to take shape new uncertainties about regional nuclear powers and “rogue states” with WMD who could supply terrorist organizations emerged. Nuclear deterrence was virtually abandoned as an effective tool based on the perception that the most imminent threat resided in irrational actors who were beyond dissuasion. The initial consensus was highly influenced by disarmament and nonproliferation regimes as well as preventive war supporters. This led many to conclude that nuclear deterrence had only a limited role and effectiveness against “rogue states”, and in particular, terrorist organizations. This shift initiated an effort to address security issues with conventional power as a counter-proliferation tool rather than relying on nuclear deterrence to thwart emerging threats, as was demonstrated in the disastrous preemptive attack on Iraq by U.S. forces in 2003.

Following the events of the Iraqi invasion, deterrent strategies were revisited leading many to conclude that deterrence had not died. In fact, it resulted in the reemergence of deterrence as a theoretical alternative to preventive counter-proliferation efforts. As Jeffrey Knopf concluded, “those who seek to write epitaphs for deterrence and containment do so prematurely. Analysis of the relevant logic and evidence shows that rogue states are not necessarily beyond the reach of deterrence, even in a world where they might be tempted to use terrorist networks to conduct a sneak attack.”¹⁵⁹ The debate that ensued was how relevant deterrence was to these new emerging threats and to what extent deterrence would be successful against them. Indeed, one needs look no further than the events of the early 1990s to see an example of the relevance of

¹⁵⁹ Quoted in Jeffrey Record, “Nuclear Deterrence, Preventive War, and Counterproliferation.” *Policy Analysis*, 519 (Washington: CATO Institute, July 8, 2004), 25, <http://www.cato.org/pubs/pas/pa519.pdf> (accessed October 4, 2006).

deterrence. Jeffrey Record argues that deterrence has been effective against “rogue states” and has prevented the use of WMD during conflicts, particularly Iraq in the first Gulf War, when he points out:

Neither Saddam Hussein nor any other rogue state regime has employed WMD against enemies capable of utterly devastating retaliation. They have threatened to use them against such enemies, just as the United States and the Soviet Union exchanged nuclear threats during the Cold War, but they have never used them. Saddam Hussein used chemical weapons against helpless Kurds and Iranian infantry in the 1980s and threatened in 1990 to make Israel “eat fire” should Israel attack Iraq, but when war came in 1991 and he faced credible threats of nuclear retaliation, the Iraqi dictator refrained from employing his massive chemical weapons arsenal against coalition forces or Israel. If Saddam Hussein was effectively deterred from using WMD against enemies capable of inflicting unacceptable retaliation, he was also most unlikely even to have contemplated transferring such weapons to organizations that were not so deterred.¹⁶⁰

This adds considerable weight to the theory that rogue states can be dissuaded from using WMD in a conflict, and that deterrence may spill over to prevent proliferation. In essence, nuclear weapons and deterrent strategies will “remain a central feature of international security affairs and indeed may well become more, rather than less, important for a variety of great and not so great powers well into the twenty-first century.”¹⁶¹

The shift in France’s nuclear strategy should not be seen as merely an adjustment to these threats by using existing capabilities, nor an attempt to hold onto old “Cold War” strategies for political purposes. Rather, the evolution in French strategic thought should be put into context of a developing “world order” in which nuclear weapons and deterrent strategies might play an ever increasing and prominent role in conflict resolution and the maintenance of peace. Those states who do not adjust nuclear doctrine risk being left in an outdated “Cold War” mentality which may lead to even worse strategic consequences or irrelevance. This simple fact requires an analysis of the current French nuclear doctrine in order to assess its validity and reveal any weaknesses, and present options that may enhance and strengthen the doctrine.

¹⁶⁰ Record, “Nuclear Deterrence,” 20.

¹⁶¹ Goldstein, “Nukes Still Trump,” 1.

B. THEORETICAL VALIDITY OF FRANCE'S NUCLEAR DOCTRINE

The broader issue emerging from the resulting “world order” revolves around the question: How effective can deterrence be against “rogue states” who may use or support terrorist organizations to carry out attacks or on non-state actors with WMD who intend their use for terrorist purposes? Even with the Hussein example, the resounding consensus to the question would seem to be that they are not very effective. As Chirac pointed out in a speech in November 2001, “the nuclear deterrent was never intended to work directly against terrorist groups, but was designed to apply to states.”¹⁶² Even President Bush articulated the prevailing view in his June 2002 West Point address:

Deterrence—the promise of massive retaliation against nations—means nothing against shadowy terrorist networks with no nation or citizens to defend. Containment is not possible when unbalanced dictators with weapons of mass destruction can deliver those weapons on missiles or secretly provide them to terrorist allies.¹⁶³

The reason behind this dominant sentiment centers on faulty intelligence or an inability to track the origins and locations of terrorist organizations with ties to state sponsors. As for non-state actors or terrorist organizations who may obtain nuclear capabilities, the rationale that deterrence will not be effective rests on three pillars: “First, terrorists are thought to be ‘irrational,’ and therefore unresponsive to the cost-benefit calculation required for deterrence. Second, many terrorists are said to be so highly motivated that they are willing to die, and so not deterred by fear of punishment or of anything else. Third, even if terrorists were afraid of punishment, they cannot be deterred because they lack a return address against which retaliation can be visited.”¹⁶⁴ This assessment paints a grim picture for the effective use of nuclear deterrence against state-sponsored terrorism. If these assertions are true, why then would France so forcefully include them in its nuclear deterrent strategy and highlight a policy that may not be realistic or feasible?

¹⁶² Yost, “New Nuclear Doctrine,” 702.

¹⁶³ Levi, “Deterring Nuclear Terrorism,” 1.

¹⁶⁴ Robert F. Trager and Dessislava P. Zagorcheva, “Deterring Terrorism,” *International Security* 30:3 (Winter 2005/06), 87-88.

1. Deterrence against State and Non-State Actors

Given the secrecy surrounding French nuclear doctrine, it is virtually impossible to ascertain the theoretical underpinnings behind strategy with concerns to state-sponsored terrorism. However, it is possible to apply the theoretical thinking of external experts toward the French model in order to seek some reliable justification and credibility for this strategy. Additionally, as will be pointed out, whether by intention or not, the French doctrine itself may have spill-over effects that could deter terrorist organizations above and beyond the stated doctrine.

Although the prevailing attitude does not deem deterrence against state-sponsored terrorism, or for that matter, non-state terrorist organization viable, this does not eliminate the potential value nuclear deterrence may have in these efforts. Some analysts believe that the case against deterrence may be a flawed argument and that deterrence can be useful against state and non-state terrorism alike. Jasen Castillo, writing in *Current History*, summarizes how nuclear deterrence may influence both “rogue” states and non-state terrorists:

The threat of nuclear retaliation will prevent rogue states from handing off nuclear arms to terrorist organizations. The potential punishment—even if its credibility at first glance seems dubious—would cost far more than any potential benefits these regimes might gain from giving away nuclear weapons. Even though non-state actors lack addresses and possess few if any assets that other countries can hold hostage in order to make deterrent threats, the addresses of the rogue regimes are common knowledge, and they possess a whole set of valuable assets, including the lives of the ruling elite. The extremely high costs that a rogue state might suffer from nuclear retaliation should give even the most reckless of regimes pause before sharing a nuclear capability with terrorists. A rogue leader might gamble that a clandestine transfer of these weapons might shield state sponsors from reprisal, but the costs of nuclear retribution are high enough to make the bet not worth the risk.¹⁶⁵

The central idea rests on creating basic uncertainty for those regimes or states that may consider proliferating WMD material to terrorist organizations. While nuclear deterrence discourages states from attacks based upon proportional retaliation, this theory applies the same rationale by holding states responsible for their actions. This focuses on the link

¹⁶⁵ Castillo, “Deterrence Still Matters,” 427.

between states and terrorist organizations because of the highly technical and costly nature of WMD production, particularly nuclear fissile material.

The production of WMD is no small task; the facilities, technical expertise, and materials necessary to produce fissile material and other WMD are so monumental a task that governments are the only institutions able to support the infrastructure and funding for these endeavors. This point was addressed by Jon Wolfsthal when he stated, “nuclear weapons do not grow on trees, and terrorist groups cannot at the moment produce highly enriched uranium or plutonium--the key ingredients in a nuclear device--which can come only from the existing military or civilian stocks of nations.”¹⁶⁶ No non-state actor appears to have produced fissile material on its own yet. Levi points out, “terrorists cannot build nuclear weapons without first acquiring fissile materials—plutonium or highly-enriched uranium—from a state source.”¹⁶⁷ For these reasons “the technical and political obstacles to WMD terrorism may in themselves be dissuasive to some degree: significant WMD capabilities in most cases are difficult either to produce or to disseminate (or both), they increase the prospect for detection or interdiction, and they may produce unintended, counterproductive results.”¹⁶⁸ This may be a hopeful assessment of the potential for nuclear deterrence against terrorism, but in the case of France it may also be the only viable choice given her relatively weak conventional forces and reluctance to support preventive war to enact regime change. Additionally, such a strategy may serve as a rationale designed to gain support for continued nuclear development and intelligence operations and capabilities, compared to the alternative of reducing nuclear forces or the ultimate rejection of a nuclear program all together in lieu of a conventional buildup that may have limited effects and costly expenditures.

The strategy, however, is not without its dilemmas; several issues pose problems. First, it does not necessarily take into account the theft or leak of fissile material.

¹⁶⁶ Jon B. Wolfsthal, “The Next Nuclear Wave,” *Foreign Affairs*, (January/February 2005) <http://www.foreignaffairs.org/20050101fareviewessay84114c/jon-b-wolfsthal/the-next-nuclear-wave.html> (accessed November 20, 2006).

¹⁶⁷ Levi, “Deterring Nuclear Terrorism,” 1.

¹⁶⁸ Pilat, Joseph F. “Dissuasion of Terrorists and Other Non-State Actors.” *Strategic Insights* 3:10 (October 2004), 17, <http://www.ccc.nps.navy.mil/si/2004/oct/pilatOct04.pdf>. (accessed September 2, 2006).

According to Levi, the issue of theft or leaks does not necessarily create a problem that totally discounts the strategy:

Insofar as deterrence itself is morally acceptable, the threat and act of retaliation against an enemy for leaking nuclear materials, whether intentional or otherwise, is moral too. With possession of nuclear weapons comes the responsibility for their control. If a state is unwilling to accept responsibility for the impact of any weapons it builds, it can choose not to build them. By foregoing that choice, it should be understood that the state takes responsibility for any impact the weapons have. To see that such a proposition is widely accepted, one need look no further than the cold war, where deterrent threats made little or no distinction between intentional and accidental launches of Soviet or U.S. missiles.¹⁶⁹

Unfortunately, some states and their leaders may take a different view on the responsibility associated with nuclear weapons than western leaders, and fanatical leaders may be willing to risk retaliation for a greater cause. But as Levi notes, “deterrent threats, consequently, dissuade these regimes from sharing nuclear weapons because they risk losing both control over territory and their actual survival. As such, the regime and its country represent valuable targets,” that can be held hostage.¹⁷⁰ This prospect could highly influence potential aggressors and at least give pause to future proliferation. In essence, nuclear deterrence may also provide an additional tool to reinforce the proliferation regime and dissuade proliferation.

A second variable which becomes problematic is attacks using WMD of different kinds. The justifications and thinking do not necessarily account for WMD other than nuclear, such as chemical or biological weapons, which can be produced independent of state sponsors and are much less traceable. This presents a major problem and one that all nations, regardless of their nuclear status or stated doctrine, have to confront. It may well turn out that this single issue is the Achilles heel of nuclear deterrence against “rogue states” and terrorism. However, just as with fissile material and nuclear weapons, nuclear deterrence may be strong enough to at least prevent states from sharing chemical and biological agents to would-be terrorists on the simple notion that any ties might be seen as proof enough to result in a retaliatory nuclear strike. Given these two variables which may weaken the case for nuclear deterrence, there are potential technological

¹⁶⁹ Levi, “Deterring Nuclear Terrorism,” 3.

¹⁷⁰ Castillo, “Deterrence Still Matters,” 429.

innovations and political strategies that would increase the effectiveness of nuclear deterrence against state and non-state actors.

2. Strengthening Nuclear Deterrence through “Tagging”

Most policymakers believe that specific links between terrorists and state sponsors may be impossible to prove, thus reducing the effectiveness of this deterrent strategy. According to Michael Levi, “its purported truth in addressing nuclear terror relies almost entirely on the assumption that “rogue states” could provide nuclear weapons ‘secretly’ to terrorists. But were such now-secret links to be exposed, deterrence could largely be restored.”¹⁷¹ Consequently, Levi believes that improved intelligence and technology may allow for specific links to be traced back to its origins. He suggests that “building on scientific techniques developed during the Cold War... a good chance of developing the tools needed to attribute terrorist nuclear attacks to their state sponsors” may be available within several years.¹⁷² The technology which Levi alludes to is called nuclear tagging, which seeks to identify the residual signature of nuclear fissile material.

Tagging is a form of nuclear forensics used to determine the origin of the fissile material in nuclear weapons. In general terms, when a nuclear weapon is detonated or fissile material is used in some sort of weapon, it leaves behind a specific signature or chemical fingerprint. According to Anders Corr, “current fissile material processing techniques leave unique chemical traces that make traceable the fissile material coming from not only a particular processing facility, but each run at each processing facility.”¹⁷³ By categorizing and identifying fissile material it can then be tagged and its origin known. Corr defines tagging as “repossessing the materials or establishing unique tags that each fissionable piece yields a unique post-explosion signature analogous to stamping each manufactured bullet with an indelible serial number and maintain

¹⁷¹ Levi, “Deterring Nuclear Terrorism,” 1.

¹⁷² Ibid.

¹⁷³ Anders Corr, “Nuclear Terror and the Blind-Side Attack: Deterrence through Nuclear Tagging.” (student working paper, Department of Government, Harvard University, Cambridge, MA, 2004), 6, <http://www.people.fas.harvard.edu/~corr/NuclearTerrorAndTheBlindSideAttackDeterrenceThroughNuclearTagging.pdf> (accessed September 03, 2006).

ammunition registration documents.”¹⁷⁴ In the event of a nuclear or radiological attack, this chemical fingerprint could be traced back to the origins of its processing. Because states are currently the only manufacturers of fissile material they could then be implicated in the attack and consequently held accountable. This system would discourage states or regimes in possession of nuclear capabilities from sharing fissile material based on the technological capability of determining its source and identifying those states which may provide clandestine terrorist organizations with fissile material. It must be noted that as of date, no official international program exists to enact a nuclear tagging program. However, efforts to complete such work are underway in the United States supported by the National Research Council, the Pentagon’s Defense Threat Reduction Agency, and the National Science Foundation.¹⁷⁵ It is unknown if France possesses the technical capability to make these connections; she probably does not. But if she does, or someday may, it would considerably strengthen the deterrent threat. However, without such a technology a nuclear strategy is less credible. As Levi puts it, “if it can put the tools in place and let its enemies know of their existence, deterrence could become one of the most valuable tools in the war on terror.”¹⁷⁶

The tagging of nuclear fissile material does have its dilemmas as well. Tagging of nuclear material would entail the cooperation and assistance of those states in possession of nuclear processing capabilities or stockpiles. As witnessed in the inspection process of Iraq’s nuclear facilities prior to the 2003 invasion, this endeavor is not easily achieved, or even permitted by belligerent states. However, as Corr points out, “non-agreement to cooperate with nuclear inspectors or tag fissile materials should be

¹⁷⁴ Corr, “Nuclear Tagging,” 2; Fissile materials are plutonium and highly enriched uranium (HEU), including uranium-233, uranium-235, plutonium-239, and plutonium-240. HEU is potentially fissile at 20%, though it is most reliable at levels above 90%. Reactor-grade plutonium and nuclear fuel from naval reactors exist in large quantities, and are often shipped across borders and kept in low-security environments. Reactor-grade plutonium can be used for fissile devices; Corr, “Nuclear Tagging,” 2n.

¹⁷⁵ For more material on nuclear tagging see, Anders Corr, “Nuclear Terror and the Blind-Side Attack: Deterrence through Nuclear Tagging.” (student working paper, Department of Government, Harvard University, Cambridge, MA, 2004), <http://www.people.fas.harvard.edu/~corr/NuclearTerrorAndTheBlindSideAttackDeterrenceThroughNuclearTagging.pdf> (accessed September 03, 2006); National Research Council Committee on Science and Technology for Countering Terrorism. *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism*. Washington, National Academies Press (2002); G.P. Gilfoyle and J.A. Parmentola, “Using Nuclear Materials to Prevent Nuclear Proliferation” *Science and Global Security*, 9 (2001), 81-92.

¹⁷⁶ Levi, “Deterring Nuclear Terrorism,” 1.

seen as non-cooperation and countered by pressures and sanctions. As additional states agree to tag fissile material, pressure increases on non-tagging states. Each state has an incentive to tag and register its fissile materials with other states and the IAEA, as not doing so will put them under suspicion in the case of a blind-side attack.”¹⁷⁷ If international consensus could be established based on the useful benefits of nuclear tagging and an international tagging regime instituted, this would exponentially increase the effectiveness of nuclear deterrence. This would be a monumental undertaking, but certainly not an insurmountable one. Regardless of such technology some analysts argue that a deterrence threat may be sufficient enough to dissuade would-be state sponsors simply because of the uncertainty that ties to terrorists may be uncovered and links to specific strikes may incite retaliation.

3. Nuclear Deterrence, Preventive War, and “Regime Change”: Conflicting Means to an End

The invasion of Iraq by the United States and its allies in 2003, after the September 11, 2001, attacks and the invasion of Afghanistan, represented a fundamental shift from deterrence toward a preventive war strategy of regime change against so-called “rogue states” seeking to acquire nuclear weapons. This new strategy was meant to be a counter-proliferation tool to prevent the development of WMD by a “rogue state” who could then transfer them to a terrorist organization. According to a recent *Policy Analysis* article, “the doctrine reflected a loss of confidence in traditional nuclear deterrence; “rogue states,” it was believed, were irrational and might launch attacks on the United States or transfer weapons of mass destruction to terrorist organizations.”¹⁷⁸ Researchers such as Jasen Castillo and Jeffrey Record suggest this shift in strategy undermines the utility of nuclear deterrence and is counterproductive to nuclear proliferation. They support the notion that nuclear deterrence may be far more effective against “rogue states” and their potential terrorist allies compared to a doctrine based on preventive military action which has very questionable outcomes.

The reasoning behind this assertion is based on the results that preventive war may produce. Preventive war may inspire other states to obtain WMD capabilities; or

¹⁷⁷ Corr, “Nuclear Tagging,” 7.

¹⁷⁸ Trager and Zagorcheva, “Deterring Terrorism,” 87.

encourage states to share their WMD stockpiles with terrorist organizations. The first argument, comprehensively articulated by Jeffrey Record, is that preventive war is contrary to long-standing international norms, not to mention prohibited by the United Nations Charter, and may result in costly and unpredictable effects that could further exacerbate regional conflicts and strategic concerns, as well as facilitate the further proliferation of WMD to other states concerned about regional security issues. Record maintains that rogue states seek to acquire nuclear weapons for the same reasons other states do:

The assumption that rogue states seek nuclear weapons solely for offensive purposes (coercion, blackmail, attack) serves the argument for preventive war against them, but it ignores the deterrent/defensive functions those weapons also perform, as well as the record of rogue state non-use of WMD against hated enemies capable of inflicting unacceptable retaliation. That record demonstrates that deterrence has worked. In the case of Iraq, Iran, and other Gulf states, nuclear weapons acquisition motives include deterrence of another regional power, strategic equality with Israel, and deterrence of intervention by outside powers, especially (in the post-Soviet era) the United States. It is eminently plausible, as Mullins observes, that “a Gulf state might believe that, by obtaining a nuclear capability that could put at risk the forces deployed for intervention by outside powers or that could put at risk the cities of any regional state providing bases for these forces, it could deter an intervention.”¹⁷⁹

The importance of this point is that states may acquire nuclear, chemical or biological weapons for reasons that far exceed the prevailing view that they would be used against western states. Their own security concerns may prompt them to obtain them, regardless of political or international condemnation.

Preventive war, as with the case of Iraq, provides other states with a solid justification to acquire or develop WMD capability in order to deter an attack by a stronger state. If faced with the imminent or perceived threat of preventive attack, states are more than likely to seek some sort of weapon to counter-balance a dominant conventional force or threaten strategic locations in order to seek a balance of power. Speaking about the U.S. policy on Iraq and its repercussions, Anthony Blinken of the Center for Strategic and International Studies contends that, “putting military preemption

¹⁷⁹ Record, “Nuclear Deterrence,” 23.

at the heart of national security policy signals America's enemies that their only insurance policy against regime change is to acquire WMD as quickly as possible, precipitating the very danger Washington seeks to prevent.”¹⁸⁰ In his analysis Record highlights the effectiveness of deterrence during the first Gulf War and maintains that preventive war cannot be a substitute for nuclear deterrence and should only be considered as a last resort when deterrence has failed. In the final analysis, it is not the mere presence of WMD in hostile hands—but rather their use—that kills and destroys. Accordingly, if their use can be deterred—and the evidence suggests that deterrence does work against rogue states, if not terrorist organizations, then deterrence of their use is manifestly a much more attractive policy option than war to prevent their acquisition.”¹⁸¹

Concerning the second argument, Jasen Castillo asserts that preventive war may also facilitate the more ominous threat of a state transferring existing WMD to terrorists. Preventive war, according to Castillo:

Undercuts if not removes another state’s ability to make a deterrent threat. Effective deterrence requires states to threaten potential opponents with a costly response that outweighs the benefits of some action they had contemplated. One way to deter an adversary is to hold hostage something that the adversary values. Typically, threats to deter nuclear attacks against a state’s homeland hold the potential attacker’s own territory hostage.¹⁸²

If a regime feels that its survival is in question due to a potential preventive conventional attack by a much stronger power seeking to enact a “regime change”, deterrent value is lost and an unpredictable and undesirable outcome may be the result. As Castillo points out:

With a regime on the verge of losing control, deterrent threats lose their punch, removing restraints on the transfer of nuclear weapons to terrorists. Governments threatened with extinction might ask themselves, “Why not give nuclear weapons to terrorists? What better way of exacting revenge?” Even then, these states might instead try to use nuclear weapons to restore deterrence or to improve the conventional balance on the battlefield.

¹⁸⁰ Record, “Nuclear Deterrence,” 23.

¹⁸¹ Ibid., 3.

¹⁸² Castillo, “Deterrence Still Matters,” 427.

In this scenario, a preventive military action may cause a state to hand over its WMD assets to a terrorist organization creating an intelligence situation which would be difficult to counteract. In this case, as Castillo indicates, “deterrence, when measured against prevention, still maintains enough credibility to prevent rogue states from sharing nuclear weapons with terrorists.”¹⁸³ These two arguments do not mean that preventive war is always off the table, but that deterrence is discredited if preventive war is enacted. In essence, deterrence never gets a chance to be utilized. As Record points out, “although few dispute the inherent difficulty of deterring terrorist attacks by suicidal fanatics, deterrence directed against the use of WMD so far appears to have worked against rogue states. Deterrence, when it works, is certainly cheaper than preventive war waged for rogue-state regime change.”¹⁸⁴

The implications of these arguments for existing nuclear powers, particularly Britain and the United States, may have a decisive impact on deterrent strategy and the future use of preventive force. In Operation Iraqi Freedom, as far as is known, these scenarios may not have happened because Hussein actually had no stockpiles of WMD. If he had, the long-term outcome of the war may be even worse than what has already transpired. Nevertheless, these arguments provide a sound justification to refine and adjust nuclear strategy and to reap the continuing benefits of deterrence. In essence, viewed from this perspective, nuclear deterrence may act as a multiplier for non-proliferation efforts while providing a certain level of diplomacy to occur. Nuclear deterrence should never be a substitute for the non-proliferation regime, but it can complement its goals if accurately utilized under a policy of deterrence first, preventive war last.

C. ASSESSING FRANCE’S NUCLEAR DETERRENT CREDIBILITY

States may make threats of retaliation and promote doctrines of deterrence, but ultimately those are tools of rhetorical value only. What matters most is the credibility to back up those doctrines or threats with actual force. The problem with credibility, as Freedman points out, is that it is “a difficult concept because it resides ultimately in the

¹⁸³ Castillo, “Deterrence Still Matters,” 427.

¹⁸⁴ Record, “Nuclear Deterrence,” 20-21.

mind of the beholder rather than in the one who was trying to create the impression.”¹⁸⁵ This creates a dilemma for deterrence because a potential aggressor may interpret situations and capabilities much differently than desired. As Jonathan Mercer indicates in his book *Reputation and International Politics*, “the central problem in deterrence theory is making threats and promises credible.”¹⁸⁶

Because states cannot control their own credibility, they must rely on certain means to support credibility. Mercer describes the means to further credibility as “resolve, capability, and interests.”¹⁸⁷ These play upon each other to strengthen or weaken credibility. Resolve is the length to which a state will go to keep its promises; its “political will.” Capability is the ability to enact the outcome desired; the means at its disposal. And interests are those commodities that a state most values, whether it be national property, strategic relationships, or economic ties.¹⁸⁸ Interests and resolve interact neatly; “when interests are high, so is resolve; when interests are low, so is resolve...predicting the target’s behavior depends upon how it views its interests in that situation.”¹⁸⁹ Therefore, one can assess states’ deterrent credibility by analyzing these three areas to more accurately determine their likely course of action.

France’s credibility has often been thought to be weak, due in most part to the humiliating defeat and occupation by Germany during the Second World War, and their failures in North-Africa, Indochina, and the Balkans. However, concerning nuclear deterrence, this claim is more difficult to make. Except for the United States’ use of nuclear weapons on Japan, there has been no state that has launched a nuclear strike. Therefore deterrence is a theoretical concept; the only proof of its effectiveness is non-use. Given this situation, one must look at France’s means to strengthen credibility.

1. Capability: France’s Nuclear Consensus and Ability

From the first nuclear test in 1960, France has maintained a nuclear capability that has continued to be upgraded and modernized. Although France has decreased her

¹⁸⁵ Freedman, “Evolution of Strategy,” 300.

¹⁸⁶ Mercer, “Reputation,” 15.

¹⁸⁷ Ibid., 15.

¹⁸⁸ Ibid., 15-17.

¹⁸⁹ Ibid., 16.

nuclear arsenal since the end of the Cold War, due to economic and political pressures, she has continued to maintain a consensus on the value of nuclear assets and deterrence. In the mid-1990s, this consensus came under immense pressure, but given the strategic situation internationally and the emerging threat of the post-Cold War era, this consensus has regained strength. Bruno Tertrais points out that a political consensus was regained after the nuclear review from 1999 to 2001 which was “conducted in the context of cohabitation (when the prime minister and president are of opposing parties), it was in effect a bipartisan process that confirmed that the national consensus for deterrence was still strong.”¹⁹⁰

The ability of France to maintain a political consensus provided for the continued modernization of French nuclear forces and doctrine. According to Pascal Boniface, the political consensus was able to be maintained by supporting both a policy of minimal *dissuasion* and a policy of disarmament resting on four aspects: “(1) the maintenance of a policy of deterrence; (2) the rejection of a posture of nuclear war-fighting; (3) the establishment of some tangible connection between France’s nuclear arsenal and European defense; and (4) the creation of a linkage between deterrence and nuclear disarmament.”¹⁹¹ This list was able to get the approval of three of the major political parties in France. A 1996 Sirpa poll indicated the consensus was also held by the populace, in which 61 percent of Frenchmen believed the country could not be protected without deterrence, and 21 percent of those supported strengthening deterrence.¹⁹² On both political and public accounts, France has demonstrated a desire and belief in deterrence representing a fundamental acceptance of a nuclear posture which underscores credibility. If this consensus did not exist, it would undermine the credibility and decrease the deterrent effect.

This consensus has also allowed for the development and evolution of French deterrent doctrine which further increases credibility. By transforming and then publicly voicing the new nuclear doctrine, France has indicated continued strategic engagement and provided a distinct warning to potential enemies. President Chirac stated, “thus the

¹⁹⁰ Tertrais, “Stands Alone,” 2.

¹⁹¹ Boniface, “After Cold War,” 3.

¹⁹² Ibid., 3.

principles underlying our doctrine of deterrence remain unchanged. But the manner in which it is expressed has evolved and continues to evolve, so as to enable us to address the context of the twenty-first century.”¹⁹³ Nuclear deterrence which is not articulated, making potential enemies aware of the possibility of retaliation, creates only an ambiguous threat. Therefore, highlighting French strategy via presidential speeches has effectively gained some level of credibility because other states will take notice of the fact that France’s strategy has evolved--not to mention that new and improved capabilities are being developed and deployed to provide a more flexible response, which will certainly raise the eyebrows of would-be aggressors. An acknowledged and stated deterrent policy, therefore, provides notice of expectations and results that may further complicate the decisions of potential attackers and adds to the credibility of the French doctrine.

The combination of a nuclear doctrine and a political or public consensus is still insufficient, though, if the means to back them up are not available. Although critical for a credible threat, these functions have to be accompanied by a distinct nuclear armaments program. The ability to enact an effective retaliatory strike clearly is the end product of the two--without capability, “political will” and strategic doctrines are irrelevant. To further increase credibility state programs must exist to execute the stated doctrine. This was recognized by Chirac when he commented, “the capabilities of the maritime and airborne components, constantly adapted to their new missions, enable us to match a coherent response to our concerns. Thanks to these new components, which are distinct but complement one another, the Head of State has a wide range of options which cover all identified threats.”¹⁹⁴ In the French case, continued development and modernization of the nuclear program producing improved targeting and flexibility provides options for policy makers that may increase credibility and add significantly to the deterrent effect.

France currently has a combination of airborne and naval weapons systems that encompass her nuclear capability. Three squadrons (20 aircraft each) of land based Mirage 2000N’s and a carrier-fleet of Super Étandard aircraft carry the Air-Sol-Moyenne

¹⁹³ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L’Ile Longue, France, January 19, 2006).

¹⁹⁴ Ibid.

Portée (ASMP) supersonic nuclear missiles. Additionally, France currently possesses four Nuclear-powered Ballistic Missile Submarines (SSBN's) capable of carrying 48 M45 Submarine-Launched Ballistic Missiles (SLBM's) with six warheads each, equaling a total of 288 deployable nuclear warheads. These provide for a flexible and tailored response capability that is not only an asset for French planners but increases the credibility of the French force. Each of these systems is currently in the process of being upgraded and modernized for increased range, payload options, and improved precision.¹⁹⁵

The French modernization program seeks to enhance its current nuclear arsenal in order to provide a wider array of strike capabilities. As Chirac noted, “the modernization and adaptation of those capabilities is thus absolutely necessary. Our deterrent must retain its indispensable credibility in an evolving geo-strategic environment.”¹⁹⁶ As mentioned previously, the nuclear systems necessary to support deterrence must be able to meet the requirements of the doctrine. Planned modernization of the French nuclear force will include replacements for existing weapons such as the addition of the M51 SLBM, capable of striking targets over 6,000 kilometers. Additionally, replacements for airborne assets will include an improved ASMP-A missile equipped with Tête Nucléaire Aéroportée (TNA) warheads. Each of these new systems will be capable of flexible payload options, and in-flight trajectory correction ability giving them more precision and range with a longer shelf-life than older weapons. Moreover, improvements to command and control computer systems will allow for greater control and flexibility within the modernization program of the nuclear forces.¹⁹⁷ By improving missile performance and its associated nuclear systems, France will be able to match its rhetoric and increase its

¹⁹⁵ Robert S. Norris and Hans M. Kristensen, “French Nuclear Forces, 2005,” *Bulletin of the Atomic Scientists* 61:04 (July/August 2005), 73-75, http://www.thebulletin.org/article_nn.php?art_ofn=ja05norris#1 (accessed November 2, 2006).

¹⁹⁶ Jacques Chirac (speech, Strategic Air and Maritime Forces at Landivisiau / L'Ile Longue, France, January 19, 2006).

¹⁹⁷ Norris and Kristensen, “French Nuclear Forces, 2005,” 73-75.

credibility with a more precise, long-range (capable of striking targets anywhere in the world), and flexible capability.¹⁹⁸

The political and public consensus combined with a clearly articulated and well thought out nuclear doctrine provides the foundations for the nuclear deterrence capability. A flexible and modern nuclear strategy and force will certainly be perceived as a much more credible deterrent. However, capability alone does not indicate credibility; capability without resolve or “political will” is ultimately a limited tool. Without having any historical proof, based on the actual use of nuclear weapons, the question then is, are there indicators that reinforce France’s “political will” or resolve when it comes down to the use of nuclear weapons? As pointed out earlier, resolve is closely tied to situational interests; therefore, there may be indicators that will provide evidence which may further suggest France’s resolve to retaliate with a nuclear strike if attacked.

2. Indicators of Interests and Resolve

As noted earlier, “political will,” or resolve, is closely linked to interests. If one’s interests are at stake in a given situation, then resolve increases because of its situational nature and the unknown variable of what a state considers vital. It is difficult to determine a future action or response. Determining what France’s interests are is a difficult proposition. With this said, there is a definite in this equation. France has made it clear that if struck or attacked on French soil, she will have not other option than to retaliate. This was explained by Chirac in June of 2001: “But in the case of a WMD attack, France would almost certainly not restrain itself, and would consider attacking important targets using all means available.”¹⁹⁹

Due to France’s relatively small size, any WMD attack would not only threaten her economic interests, but more importantly would severely threaten vital political principles--namely her independence and autonomy. Given Gaullist thinking, this is

¹⁹⁸ For more detailed material on the French nuclear modernization program see, Dominique Lalanne, “New Nuclear Strategy, New Nuclear Weaponry,” International Network of Engineers and Scientists Against Proliferation, bulletin 23 (2006), <http://www.inesap.org/bulletin23/art07.htm> (accessed November 04, 2006); Robert S. Norris and Hans M. Kristensen, “French Nuclear Forces, 2005,” *Bulletin of the Atomic Scientists* 61:04 (July/August 2005), 73-75. http://www.thebulletin.org/article_nn.php?art_ofn=ja05norris#1 (accessed November 2, 2006).

¹⁹⁹ Chirac (speech, The Institute of Higher National Defence Studies, Paris, France, June 8, 2001).

certainly the most-valued asset. It would be difficult to imagine that a major WMD attack on France would not completely cripple the government's ability to exist. Therefore, the most logical postulation is that regardless of stated interests beyond national borders, France's primary interests reside on its own soil. Certainly France has initiated the use of force outside of her national territory, such as the Suez and Indochina military actions, demonstrating some political will to address concerns outside of her own borders. However, these were tied to colonial interests at the time, rather than defense of the homeland. But this in no way means that a French president would be willing to initiate a retaliatory strike in such an event.

Most recently, the nuclear tests in 1995 signaled the importance France placed on the nuclear program. While popular opinion and international perceptions of this testing were very critical, France ignored this sentiment and proceeded to test weapons anyway. The tests demonstrated a strong level of political will concerning the modernization of the one weapon that supposedly ensures continued French independence. Therefore, it is difficult to fathom that France would invest so much politically and economically in a weapon she is not prepared to utilize. Certainly it might take a direct attack on French soil to initiate a nuclear retaliation. Should France fail to retaliate, her political credibility would fade away.

In both the 2001 and 2006 speeches, Chirac clearly stated a desire to work with other European nations on nuclear matters and suggested a *dissuasion concertée*. But this in no way means that France is willing to extend its nuclear umbrella. In principle alone, this would go against Gaullist strategy and rationale implying that no other country would engage in a nuclear war to save others. This same argument prompted France to obtain its own nuclear arsenal, become autonomous of NATO and criticize the United States' nuclear deterrent during the Cold War. Therefore, it is unclear that France would be willing to execute nuclear strikes in response to attacks on its EU partners. The strongest evidence indicates that France would be willing to respond with a nuclear strike against attacks on its homeland, rather than retaliate for attacks against its interests outside of its national borders.

D. CONCLUSION

At the close of the Cold War the value of nuclear deterrence was called into question. However, given the increase in political and military tension in the new world order, deterrence is being reconsidered as a valuable tool for national defense. The basic rationale for nuclear deterrence against “rogue states” armed with WMD does exist and may have a spill-over effect useful against terrorist organizations. Nuclear deterrence exemplified by these theories may benefit proliferation efforts as well and act as an alternative to “preventive war” and “regime change.” As Jeffrey Record concludes: “The evidence strongly suggests that credible nuclear deterrence remains effective against rogue states’ use of WMD, if not against attacks by fanatical terrorist organizations; unlike terrorist groups, rogue states have critical assets that can be held hostage to the threat of devastating retaliation, and no rogue state has ever used WMD against an enemy capable of such retaliation.”²⁰⁰ Furthermore, new technologies such as nuclear tagging could strengthen deterrence by providing a tracing capability that would help identify the source of weapons used in a nuclear “blind-side” attack. Tagging would ensure that states which share nuclear fissile material used in a terrorist attack would be held accountable and subject to massive retaliation.

France maintains a credible nuclear capability that is supported by a public and political consensus backed by a clearly articulated doctrine. The French nuclear capability provides options for precise, long-range and more controllable nuclear strikes which strengthens overall credibility. Modernization upgrades will improve this capability and provide increased response options for French leaders. However, it would be difficult to determine France’s “political will” to retaliate for an attack with a nuclear strike, unless that attack occurred within her borders. Nevertheless, France has a viable nuclear doctrine able to be utilized when directly threatened.

²⁰⁰ Record, “Nuclear Deterrence,” 1.

THIS PAGE INTENTIONALLY LEFT BLANK

V. CONCLUSION

The perceptions of power and the realities of power symbolize the point of departure and the conclusion of the present work. Since the end of World War II and the defeat and occupation by Germany, France has been perceived by its many critics and doubters to be relatively weak in defense matters. The leading powers, particularly the United States, have viewed France in such a manner, which does little justice to reality. Such a perception took on added weight in the Indochina and Suez debacles (though operationally, the Egyptian operation was a success) as well as in the first Gulf War and in the early UNPROFOR phase of the wars of ex-Yugoslavia. Those who disliked France for other reasons of politics, society and culture could belittle French military power, in the process ignoring those epochs in the past in which the French had been the predominate military power in Europe.

Nonetheless, French conventional forces, although expanding in scope and capability, were little more than a step child from the 1960s until the recent past. Chief emphasis has been bestowed to the nuclear arsenal, while the regular forces of the year 2006 are intended mainly for peacekeeping missions with a regional focus. This regional focus has only contributed to the perception of France's weakness in defense matters. Additionally, the political rationale and justification used by de Gaulle to create the *force de frappe* helped form the opinion that France was more concerned about the political utility of the ownership of nuclear weapons rather than their operational use. This in effect created the perception by such other stakeholders as the United States and Britain that France was a strategically weak partner out to gain political power rather than strategic security. This perception was a symptom of an Anglo-Saxon dominance within the Atlantic Alliance during the Cold War and its marginalization of French political and security interests. Not surprisingly, this led to counter-efforts to regain France's *grandeur* in international affairs and solidify its own national independence through the evolution of the *force de frappe*.

The search for *grandeur* was bolstered by the strategic vision and political leadership of General Charles de Gaulle who sought to reestablish France's autonomy through the development of a nuclear capability. Under de Gaulle, the *force de frappe*

provided the necessary tool to further assert France's political and security interests, ultimately leading to the mid-1960s withdrawal from NATO's integrated military structure after increasing concerns over the validity of the United States' nuclear umbrella and France's role within the Alliance. The independence and autonomy gained during this time allowed France to develop a distinctive nuclear strategy based on "proportional deterrence" an enduring Gaullist legacy that was evident throughout the remainder of the Cold War.

This legacy has continued to endure beyond the Cold War and is most evident in the rhetoric of the revised nuclear strategy presented by President Chirac in 2005, although in a much different and challenging international environment. Unfortunately, given the political purpose of nuclear weapons espoused by France during the Gaullist years and its perception deriving from World War II and the Cold War, analysts outside of Europe have given little attention to the evolving strategy. Other than the passing newspaper article or internet press release reporting about the strategy, no official comment or assessment has been made by the U.S. administration or other leading countries to determine if France's doctrine is viable and credible. However, by dissecting the French strategy and looking at the theoretical underpinnings one is able to dispel the perception that France maintains a nuclear arsenal for political purposes only, and come to the conclusion that France has developed a valid strategy that in effect could have broad implications for the EU, NATO and the United States, the results of which might lead to a concerted effort by the EU to develop its own nuclear deterrence, build a bridge back to the trans-Atlantic alliance, and help to heal the "wounds" incurred by the Iraq invasion in 2003.

Currently, France's nuclear strategy seeks to guarantee national security by deterrence against not only major powers, but those regional actors who may threaten the interests of France and the more ominous threat of "rogue states" armed with WMD who may support terrorist organizations. The evolution in French strategy is the result of many factors closely associated with national interests. France's relatively small conventional forces, although highly capable, do not allow it to project an overwhelming capability against other regional powers. France has invested enormously in an effort to fund and field nuclear forces, giving her a strong nuclear history and viable capability

which she does not want to relinquish. France's geostrategic location makes her vulnerable to threats in the region and beyond, particularly those stemming from the Middle East. France ties *grandeur* in international politics to nuclear capability. The nuclear option provides France with a viable alternative to more costly conventional forces which would require an increase in economic and political capital. And lastly, it provides France with an alternative to "preventive war" which she does not accept as legitimate, nor have the conventional capability to engage.

Based on the arguments presented in this study, France's strategy can be seen as a valid deterrent against these threats and may have the added benefit of reducing proliferation of WMD to terrorist organizations. The theoretical arguments in support of this assessment indicate that France has articulated a well thought-out and adaptable nuclear strategy that discourages "preventive war" as a substitute for nuclear deterrence while simultaneously presenting an effective counter-proliferation tool. Both of these can be seen as a direct political interest for France and many other states. This strategy provides an alternative for those states that are unwilling to support a "preventive war" strategy due to its unpredictable nature and the possible unintended consequences it brings, not to mention endangering credibility and violating international law. The efforts to shift nuclear doctrine in order to address evolving threats within the new "world order" have brought to light the continued relevance of nuclear deterrence and opened the door for potential advancements in technology and policy that have important implications for Europe, NATO, and the United States.

While France has a fairly clear strategy regarding the use of its nuclear forces, this strategy could be strengthened significantly by supporting fissile material "tagging." Nuclear "tagging" would make it possible to identify the country and facility involved in the manufacturing and processing of nuclear fissile material used in an attack. This procedure would also add legitimacy to France's nuclear deterrence theory in the eyes of the EU and United States. In fact, the addition of "tagging" to the strategy could make it more attractive to all stakeholders involved and bolster France's position in world politics. Now, it is important to understand that France has no plans to utilize nuclear technology for preventive measures, but there again, should France decide to incorporate

the “tagging” option into their strategy, she would only convince the other stakeholders of her strictly defensive posture.

For years the world powers have seen the limitations of the NPT, as countries such as Iran and Iraq have ignored their previous promises not to acquire nuclear weapons. “Tagging” would only act as a sort of reinforcement of the NPT. This alone should prove attractive to those countries originally involved in the signing of the NPT and add further credibility to France’s doctrine. Support of a “tagging” program would not only improve the attractiveness of France’s nuclear deterrent strategy to other countries, it could even allow for an opportunity for France to reclaim some of its lost *grandeur* by leading the movement in support of this strategy. However, even if France did not lead the advancement of this approach, “tagging” would enable France to at least take a major role in the process. Additionally, simply by joining with other leading countries such as the United States and Britain on any major project would go far in healing old wounds and perhaps forge a new strategic bond which would enable France to rejoin NATO. Perhaps the latter is rather far-fetched, however, there is no doubt that “tagging” has obvious benefits, some of which could possibly reach beyond the advantages of tracking down countries or individuals who are sharing nuclear technology with terrorist organizations. In any case, “tagging” should be explored by France, and its alliance partners, as an option to enhance deterrence. Accordingly, a movement should be initiated to gain support for international acceptance of a “tagging” regime.

Many are not convinced that France’s nuclear deterrent strategy is viable. In fact, some feel that this strategy would only incite the proliferation of nuclear weapons. It is important to understand that a nuclear strategy alone does not necessarily incite nuclear proliferation. While nuclear capabilities and strategies existed during the Cold War, they served a purpose during this time and gained immense credibility, as evident in France’s acquisition. Recently the shift to uni-polarity with the U.S. acquiring an overwhelming conventional strength, is forcing smaller countries to look elsewhere for alternate means of protecting their interests. These alternate means tend to be nuclear in nature because they require far less investment and pack significantly more power. However, this is not the case with France. France’s deterrent strategy shows no evidence of using nuclear weapons to pursue goals other than political and provide the ability to retaliate if directly

attacked. France has no intentions of preventive war. Clearly, France's nuclear strategy is defensive in nature and could actually add to the diminishing of nuclear proliferation. France's goal is to hold the terrorists and "rogue states" responsible for their actions and to support the NPT regime. In these ways it is evident that a nuclear policy does not have to lead to proliferation. In fact, a large conventional force alone could spur nuclear proliferation as the only means to deter an attack.

Another factor to consider has to do with lowering the threshold for deployment of nuclear capabilities. It has been postulated that by opening up these capabilities to more countries it would lower the threshold for a strike. However, a nuclear deterrent strategy that is precise and well-formulated will only allow more measured deployment and discriminate targeting. Instead of a broad-based and blunt strike, such as was the case in Hiroshima and Nagasaki, this new strategy would enable France, and any other country which might adopt this strategy, to exact a nuclear strike with such accuracy that little collateral damage would ensue. This does not indicate that the nuclear threshold has been lowered, rather that effects are being reduced. There is no clear indication that it would be easier to justify a nuclear strike, just that a retaliatory strike would exact far less devastation.

Given these issues, France has provided a deterrent response that may be far more effective than "preventive war." The arguments against the use of preventive war as a tool of counter-proliferation indicate that overwhelming conventional might used to enact "regime change" may further incite WMD proliferation. This contradicts the goals of the proliferation regime and undermines the foundation of deterrence by reducing the ability to hold elements of a state hostage, thus negating any benefit of a deterrent strategy or utility of nuclear weapons. The denial and non-support of "preventive war" enacted for regime change benefits France because it bolsters the utility of the nuclear deterrent strategy. This fact may offer another perspective on why the French did not support the United States in the invasion of Iraq. The simplest rationale is that it would have undermined nuclear deterrence and facilitated the possible proliferation of WMD in a way that would have significantly reduced the justifications for the nuclear deterrent in the first place. France, by not accepting the goals of "preventive war," has been able to distance herself from the United States while gaining credit toward nuclear deterrence,

providing a reasonable uncertainty for potential aggressors that France may actually forgo a conventional response in lieu of a nuclear retaliation if attacked.

The French example has opened the door for the U.S. to consider an alternative to conventional preventive war. Additionally, it has established the ground work for a shift in U.S. strategy back toward nuclear deterrence simultaneously providing an opportunity to reduce nuclear stockpiles and further strengthen the proliferation regime. France's deterrent posture presents a challenge to U.S. dominance in the field of nuclear strategy and the concept of "preventive war" for European NATO countries who do not want to enact a preventive war regime and who do not have public support or economic ability to field upgrades to conventional forces. The troubling events associated with the Iraq invasion put France in the position to provide a viable alternative and may force a revision in U.S. strategy from an aggressive conventional posture toward a nuclear deterrence first posture. With a deterrent strategy already in place, the U.S. may look to France's example as a viable alternative, providing France and the U.S. with an opportunity to "reach across the table" and join in a more collective approach in addressing future conflicts by focusing on the utility of nuclear deterrence first and preventive actions last. This may provide an opportunity to increase alliance relations in nuclear strategies and allow for future collaboration in the area of nuclear "tagging," each of these being a vast improvement of relations compared to the rift accentuated by the Iraq invasion in 2003.

The implications for NATO are broad and create a challenge for institutional collaboration. France's deterrent posture may increase the opportunity for coordination among alliance members. It may call into question the current NATO nuclear strategy closely associated with flexible response and lead to discussions on the utility of the U.S. nuclear umbrella over Europe. As NATO, and the EU for that matter, continues to expand, defense of these enlarged organizations against a future threat may become more reliant on nuclear deterrence. This fact alone will call for a review of strategies that will have to be acceptable to European nations. This may provide an opportunity for France to rejoin, in the least, the NPG and a rapprochement of alliance interests in nuclear strategy. The impact of this situation could determine the future role of U.S. nuclear forces in Europe and ultimately create an opportunity in which France could be seen as

the dominant power in the region. However unlikely this may be, it is a future consideration that NATO will have to address based on the emergence of a French nuclear doctrine that may hold a more acceptable and viable alternative to the current arrangement and strategy.

For the European Union, the nuclear issue will have to be broached. Although it is certainly not clear that support for an EU nuclear deterrence exists, the fact that Great Britain and France maintain a nuclear deterrence will require an analysis and possible adoption of a nuclear capability to be integrated into the ESDP. This will force the recognition that economic concerns will collide with security concerns and a determination will have to be made in order to address the concerns on a supra-national level. It is certainly not evident that this will take place anytime soon. The framework within the EU has not been evolved to address the issue of collective nuclear deterrence.

France's deterrent posture means that overwhelming retaliation will be considered if ties to terrorists' organizations who strike France and actions of "rogue states" can be determined. This complicates the decision-making for regional powers and "rogue states," building a level of uncertainty that will, in the least, create a pause in their deliberations, if not deter them altogether. Rogue state will have to gamble on the likelihood of retaliation for support of terrorist organizations that may use shared WMD capabilities to meet political goals through attacks on French soil. It holds them culpable for their continued support of and ties with terrorists beyond the fear of a conventional attack. No longer is a conventional attack having uncertain outcomes on the table, but rather an unacceptable retaliation that would target the regimes existence and create an unacceptable outcome for the country. France's deterrent strategy may force tighter restrictions on the sharing of WMD by aggressor states and help decrease the potential for proliferation. The French doctrine has laid the ground work for the incorporation of technologies such as "tagging" and an international movement that can improve intelligence capabilities to the point that "rogue states" need be very concerned about their suspected or actual ties to terrorist.

At the end of the day, the validity of nuclear deterrence in the post-Cold War era remains intact. France has sought to be the first to initiate a deterrent strategy that addresses evolving threats and created an opportunity for alliance statecraft concerning

strategic security. The simple fact that France's deterrent strategy is a viable alternative to other means may, in and of itself, force revisions and reconsiderations of the utility of nuclear deterrence resulting in a new international consensus that may yield a more robust effort to address policy and technology concerns for the twenty-first century. It is the researcher's hope that this work shall aid in the better understanding of the justification and rationale of the revised French nuclear doctrine and thus make for more successful statecraft between alliance members. The rift in the trans-Atlantic Alliance exemplifies a need for better understanding and knowledge. This knowledge is absolutely necessary for improved relations and effective policy. It is the hope of this author that the findings of this study might contribute to such a goal.

LIST OF REFERENCES

Aron, Raymond. *The Great Debate*, (New York: Doubleday, 1965).

Arteaga, Felix. "French Nuclear Deterrence According to President Chirac: Reform, Clean Break or Reminder?" *Real Instituto Elcano*, January 24, 2006, <http://www.realinstitutoelcano.org/analisis/905.asp> (accessed September 11, 2006).

Beaufre, André. *Deterrence and Strategy*. New York: Praeger, 1966.

—. *An Introduction to Strategy, With Particular Reference to Problems of Defense, Politics, Economics, and Diplomacy in the Nuclear Age*. New York: Praeger, 1965.

—. *Strategy for Tomorrow*. New York: Crane, 1974.

—. *Strategy of Action*. New York: Praeger, 1967.

Boniface, Pascal. "The Specter of Unilateralism." *The Washington Quarterly*, 24, no. 3 (2001): 155-162.

—. "The Future of the French Nuclear Posture." *Strategic Analysis*, November 1999, vol. 23, no. 8. http://www.ciaonet.org/olj/sa/sa_99bop01.html (accessed July 20, 2006).

—. "French Nuclear Weapons Policy after the Cold War." *The Atlantic Council of the United States*, (August 1998). http://www.acus.org/docs/9808-French_Nuclear_Weapons_Policy_After_Cold_War.pdf (accessed September 15, 2006).

Bowen, N. "Multilateralism, Multi-polarity, and Regionalism: The French Foreign Policy Discourse." *New York Times* (2003).

Bratton, P. "France and the Revolution in Military Affairs." *Contemporary Security Policy* 23, no. 2 (2002): 87-112.

Butcher, Martin, Otfried Nassauer and Stephen Young. "Nuclear Futures: Western European Options for Nuclear Risk Reduction," *British American Security Information Council and the Berlin Information-center for Transatlantic Security (BITS)*, December 1998, BASIC/BITS Research Report 98.6. <http://www.basicint.org/pubs/Research/1998nuclearfutures1.htm> (accessed September 09, 2006).

Castillo, Jasen J. "Nuclear Terrorism: Why Deterrence Still Matters," *Current History*, no. 659, (December 2003).

http://www.currenthistory.com/org_pdf_files/102/668/102_668_426.pdf (accessed September 07, 2006).

Chirac, Jacques. (Speech, The Institute of Higher National Defence Studies, Paris, France, June 8, 2001).

http://www.cedoc.defense.gouv.fr/IMG/pdf/Discours_President_2001_en.pdf (accessed May 23, 2006).

Chirac, Jacques. (Speech, Strategic Air and Maritime Forces at Landivisiau / L'Ile Longue, France, January 19, 2006).

http://www.elysee.fr/elysee/anglais/speeches_and_documents/2006/speech_by_jacques_chirac_president_of_the_french_republic_during_his_visit_to_the_strategic_forces.38447.html (accessed May 23, 2006).

Cimbala, S. J. *Deterrence and Nuclear Proliferation in the Twenty-First Century*. Praeger Publishers, 2000.

Corr, Anders. "Nuclear Terror and the Blind-Side Attack: Deterrence Through Nuclear Tagging." (student working paper, Department of Government, Harvard University, Cambridge, MA, 2004).

<http://www.people.fas.harvard.edu/~corr/NuclearTerrorAndTheBlindSideAttackDeterrenceThroughNuclearTagging.pdf> (accessed September 03, 2006).

Croft, S. "European Integration, Nuclear Deterrence and Franco-British Nuclear Cooperation." *International Affairs* (Royal Institute of International Affairs 1944-) 72, no. 4 (1996): 771-787.

Debouzy, Olivier. "French Nuclear deterrence Doctrine: An Aggiornamento," *European Affairs*, vol. 7, no. 1 & 2 (Spring/Summer 2006).

http://www.europeanaffairs.org/current_issue/2006_spring_summer/2006_spring_summer.php4 (accessed July 29, 2006).

Freedman, Lawrence. *US Intelligence and the Soviet Strategic Threat*. London: Macmillan, 1977.

———. "Why the West Failed." *Foreign Policy*, no. 97 (Winter, 1994-1995): 53-69.

———. *The Evolution of Nuclear Strategy*. New York: Palgrave Macmillan, 2003.

Gallois, Pierre Marie. *The Balance Of Terror: Strategy For The Nuclear Age*. Boston: Houghton Mifflin, 1961.

———. *Soviet Military Doctrine and European Defence: NATO's Obsolete Concepts*. London: Institute for the Study of Conflict, 1978.

Gilfoyle, G.P. and J.A. Parmentola. "Using Nuclear Materials to Prevent Nuclear Proliferation" *Science and Global Security*, vol. 9 (2001): 81-92.

Glaser, C. L. "Why NATO is Still Best: Future Security Arrangements for Europe." *International Security* 18, no. 1 (1993): 5-50.

Goldstein, Avery. "Why Nukes Still Trump: Deterrence and Security in the 21st Century," *Foreign Policy Research Institute* (November 13, 2000).
<http://www.fpri.org/enotes/military.200001113.goldstein.nukesstilltrump.html> (accessed on August 22, 2006).

Gordon, Michael R. and Bernard E. Trainor. *Cobra II: the inside story of the invasion and occupation of Iraq*. New York: Pantheon Books, 2006.

Gordon, Philip H. *A Certain Idea of France*. Princeton, NJ: Princeton University Press, 1993.

Goure, D. "Nuclear Deterrence, then and Now." *Policy Review* (2002): 43-56.

Harper, John Lamberton. *American Visions of Europe : Franklin D. Roosevelt, George F. Kennan, and Dean G. Acheson*. Cambridge University Press, 1996.

Hartley, K. B. N. "The Future of European Defence Policy: An Economic Perspective." *Defence and Peace Economics* 14, no. 2 (2003): 107-115.

Iklé, Fred Charles. "The Second Coming of the Nuclear Age." *Foreign Affairs*, vol. 75, no. 1 (Jan/Feb 1996): 119-128.

Kirchner, E., and J. Sperling. "The New Security Threats in Europe: Theory and Evidence." *European Foreign Affairs Review* 7, (2002): 423-452.

Kohl, Wilfrid L. *French Nuclear Diplomacy*. Princeton, NJ: Princeton University Press, 1971.

Kohl, Wilfrid L. "The French Nuclear Deterrent." *Proceedings of the Academy of Political Science*. vol. 29, no. 2, (Nov., 1968), 80-94.

Pilat, Joseph F. "Dissuasion of Terrorists and Other Non-State Actors." *Strategic Insights*, vol. 3, iss. 10 (October 2004),
<http://www.ccc.nps.navy.mil/si/2004/oct/pilatOct04.pdf> (accessed November 7, 2006).

Record, Jeffrey. "Nuclear Deterrence, Preventive War, and Counterproliferation." *Policy Analysis*, no. 519 (Washington: CATO Institute, July 8, 2004).

Robbin F. Laird. *French Security Policy: From Independence to Interdependence*. Bolder, CO: Westview Press, inc., 1986.

Lalanne, Dominique. "New Nuclear Strategy, New Nuclear Weaponry," International Network of Engineers and Scientists Against Proliferation, bulletin 23 (2006). <http://www.inesap.org/bulletin23/art07.htm> (accessed November 04, 2006).

Larkin, B. D. *Nuclear Designs: Great Britain, France, and China in the Global Governance of Nuclear Arms*. Transaction Publishers, 1995.

Levi, Michael A. "Deterring Nuclear Terrorism." *Issues in Science and Technology*, Spring 2004. vol. 20, iss. 3; 70-74. <http://www.brookings.edu/views/articles/levi/20040401.htm> (accessed August 10, 2006).

Lindley-French, Julian and Katja Flückiger. *A Chronology of European Security & Defence 1945-2005*. Geneva Switzerland: Geneva Center for Security Policy, 2005.

Menon, Anand. "From Independence to Cooperation: France, NATO and European Security." *International Affairs* (Royal Institute of International Affairs 1944-) 71, no. 1 (1995): 19-34.

———. *France, NATO and the Limits of Independence 1981-97*. New York: St. Martin Press, Inc., 2000.

Mercer, Johnathon. *Reputation and International Politics*. Ithaca, NY: Cornell University Press, 1996.

Moore, Molly. "Chirac: Nuclear Response to Terrorism is Possible," *Washington Post.com*, January 20, 2004. <http://www.washingtonpost.com/wp-dyn/content/article/2006/01.html> (accessed May 20, 2006).

Meier, Oliver. "Chirac Outlines Expanded Nuclear Doctrine," *Arms Control Today*, March 2006, http://www.armscontrol.org/act/2006_03/MARCH-chirac.asp (accessed September 12, 2006).

National Research Council Committee on Science and Technology for Countering Terrorism. *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism*. Washington, National Academies Press (2002).

Norris, Robert S. and Hans M. Kristensen. "French Nuclear Forces, 2005," *Bulletin of the Atomic Scientists*, vol. 61, no. 04 (July/August 2005): 73-75. http://www.thebulletin.org/article_nn.php?art_ofn=ja05norris#1 (accessed November 2, 2006).

Robert S. Jordan. *Norstad: Cold War NATO Supreme Commander*. New York: St. Martin's Press, inc., 2000.

Paul, T.V. Richard J. Harknett and James J. Wirtz, eds. *The Absolute Weapon Revisited; Nuclear Arms and the Emerging International Order*. University of Michigan, 1998.

Pedlow, Gregory W. "NATO Strategy Documents 1949-1969" *The North Atlantic Treaty Organization Archives* (May 1999.) <http://www.nato.int/docu/stratdoc/eng/intro.pdf> (accessed December 28, 2006).

Phythian, Mark. "The Perfect Intelligence Failure? U.S. Pre-War Intelligence on Iraqi Weapons of Mass Destruction." *Politics & Policy*, vol. 34, no. 2 (2006): 400-424.

Pillar, Paul R. "Intelligence, Policy, and the War in Iraq," *Foreign Affairs* (March/April 2006).

Porch, Douglas and James J. Wirtz. "Surprise and Intelligence Failure." *Strategic Insights* 1, no. 7 (Sep. 2002). <http://www.ccc.nps.navy.mil/sept02/homeland.asp> (accessed November 14, 2006).

Quinlan, M. "The Future of Nuclear Weapons: Policy for Western Possessors." *International Affairs* (Royal Institute of International Affairs 1944-) 69, no. 3 (1993): 485-496. <http://www.jstor.org/view/00205850/di012498/01p0779y/0> (accessed July 12, 2006).

Roman, Peter J. *Eisenhower and the Missile Gap*. Ithaca. N.Y.: Cornell University Press, 1997.

Sagan, S. D. "Why do States Build Nuclear Weapons?: Three Models in Search of a Bomb." *International Security* 21, no. 3 (1996): 54-86.

Simpson, J. H. "France, the United Kingdom and Deterrence in the Twenty-First Century." *Contemporary Security Policy* 25, no. 1 (2004): 136-151.

Singer, Daniel. *Prelude to Revolution: France in May 1968*. New York: Hill and Wang, 1970.

Sokolski, Henry D., ed. "Getting Mad: Nuclear Mutual Assured Destruction, Its Origins and Practice," *The Strategic Studies Institute Publications Office*, U.S. Army War College, 2004. <http://www.npec-web.org/Books/GettingMAD.pdf> (accessed June 16, 2006).

Tertrais, Bruno. "Nuclear policy: France Stands Alone," *Bulletin of the Atomic Scientists*, vol. 60, no. 04, 2004. 48-55. http://www.thebulletin.org/article.php?art_ofn=ja04tertrais (accessed June 3, 2006).

———. *Nuclear Policies in Europe*. Oxford, NY: Oxford University Press, 1999.

Thornhill, John and Peter Spiegel. “Relevance of ‘force de frappe’ to terrorist age,” *Financial Times*, 20 January 2006.
<http://search.ft.com/searchArticle?page=2&queryText=nuclear+deterrence&y=0&ja=avascriptEnabled=true&id=060120000865&x=0> (accessed May 30, 2006).

Trachtenberg, Marc. *History & Strategy*. Princeton, NJ: Princeton University Press, 1991.

Trager, Robert F. and Dessislava P. Zagorcheva, “Deterring Terrorism,” *International Security*, Vol. 30, No. 3 (Winter 2005/06): 87–123.

Vernet, D. “The Dilemma of French Foreign Policy.” *International Affairs (Royal Institute of International Affairs 1944-)* 68, no. 4 (1992): 655-664.
<http://www.jstor.org/view/00205850/di012495/01p0008n/0> (accessed July 20, 2006).

Wirtz, James J. "Intelligence to Please? The Order of Battle Controversy during the Vietnam War," *Political Science Quarterly* 106, no. 2 (Summer 1991): 239-263.

Wolfsthal, Jon B. “The Next Nuclear Wave,” *Foreign Affairs*, (January/February 2005)
<http://www.foreignaffairs.org/20050101fareviewessay84114c/jon-b-wolfsthal/the-next-nuclear-wave.html> (accessed November 20, 2006).

Yost, David S. “France’s Evolving Nuclear Strategy.” *Survival* 47, no. 3 (2005): 117-146.

———. “France’s Nuclear Dilemmas.” *Foreign Affairs* 75, no. 1 (1996): 108–20.

———. “France’s New Nuclear Doctrine,” *International Affairs*, vol. 82, no. 4 (2006): 701-721.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
Ft. Belvoir, Virginia
2. Dudley Knox Library
Naval Postgraduate School
Monterey, California